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ABSTRACT

Findings of a review of what the National Institute of Education's (NIE) Education and Work-funded projects have learned about questions career educators usually face are organized into this resource book for educational program planners and implementers. Two general groups of questions are addressed dealing with issues in program development and with concerns affecting day-to-day delivery of career education. Topics discussed include the following: emphasis on career education, career education that is sex and race fair, what schools should teach and what educators need to know about the world of work, career decision making and guidance, experiential career education, role of colleges and universities, how adults benefit from career education, planning information needed, organization of career education programs, management issues, school district size, staff orientation, community resources for instructional purposes, and commercial instructional materials. The largest portion of this guide features abstracts or summary descriptions of eighty-three contracts and grants managed by NIE since FY 72, arranged alphabetically and numerically; products available are also noted. (TA)

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DIRECTIONS IN CAREER EDUCATION:

QUESTIONS PEOPLE ASK ABOUT EDUCATION AND WORK

by

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Northwest Regional Educational Laboratory
Portland, Oregon

November, 1977

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NIE PAPERS IN EDUCATION AND WORK

The National Institute of Education was created by Congress in 1972 to help solve problems in American education. One of the Institute's major program areas is education and work. As its name implies, the Education and Work Group sponsors research on the nature of the relationship between schooling and work. It also develops programs which aim at increasing the ability of youth and adults to choose, enter and progress in careers without regard to the barriers imposed by sex or race on career aspirations. In order to further professional understanding of these research and development activities, the Education and Work Group publishes a report series, NIE Papers in Education and Work. The following titles have been selected for publication; other titles are forthcoming:

1. The Development of Career Awareness in Young Children, by Aimee Dorr Leifer and Gerald S. Lesser of the Center for Research in Children's Television, Harvard Graduate School of Education.

2. Facilities Handbook for Career Education, by William B. Gill and Ann W. Luke of System Development Corporation.

3. Sex Discrimination in the Selection of School District Administrators: What Can Be Done?, by Doris M. Timpano of Career Women in Education and Louise W. Knight.

4. Entitlement Papers, edited by Norman D. Kurland, New York State Department of Education.

5. Education and Job Satisfaction: A Questionable Payoff, by Robert P. Quinn and Martha S. Baldi de Mandilovitch, Survey Research Center, The University of Michigan.

6. Paid Educational Leave: A Practical Way To Relate Work and Education and An Effective Way To Implement Life Long Learning, by Herbert Levine, Director of the Labor Education Center, Rutgers University.

7. The Career Intern Program: Final Report (two volumes: Vol. I, An Experiment In Career Education That Worked; Vol. II, Technical Appendices).

8. Influences Affecting Women's Participation in Mathematics (Available December, 1977).

9. Industry/Education Community Councils (Available December, 1977).

10. Sex-Fair Interest Measurement: Research and Implications (Available January, 1978).

11. Debate on Career Education (forthcoming in early 1978).

12. Home-Based Career Education (forthcoming in early 1978).

OTHER EDUCATION AND WORK GROUP PUBLICATIONS

1. Education and Work Group: Fiscal Year 1977/ 1978 Program Plan.

2. Directions in Career Education: Answers to Questions People Ask About Education and Work.

3. Issues of Sex Bias and Sex Fairness in Career Interest Measurement, edited by Esther E. Diamond.

4. Guidelines for Assessment of Sex Bias and Sex Fairness in Career Interest Inventories.

5. The Community Is The Teacher: Experience-Based Career Education.

6. A Comparison of Four Experience-Based Career Education Programs.

7. Recurrent Education.

Single copies of all the above documents are available at no cost from the Education and Work Group, National Institute of Education, U.S. Department of Health, Education and Welfare, Washington, D.C. 20208.

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FOREWORD

Ever wondered if the money spent for educational research and development makes any difference? Had you joined our recent odyssey through stacks of reports from career education-related projects funded by the National Institute of Education (NIE) since 1972, your answer would probably be the same as ours: It can and it does.

Why did NIE choose to invest several million dollars in career education research and development? Because questions like these emerge as school leaders wrestle with ways to help people make sound career decisions:

- How can education help people acquire good career decision-making skills?
- What information do they need to make career decisions?
- What barriers do people encounter as they make career decisions throughout a lifetime?
- What variety of learning experiences should we offer persons as they seek and find careers that suit them?
- What kinds of curriculum resources do schools need to help accomplish career education purposes?
- What sorts of institutional arrangements will assure that career development is a coordinated process?

So we at NWREL were given this task: Capture the essence of what NIE's Education and Work-funded projects have learned about these and other questions

and organize the findings into a resource book for educational program planners and implementers.

Coming from classroom teaching and administrative backgrounds ourselves, we have watched career education grow as a positive force for change in education and have come to appreciate the potential of research, development and evaluation for helping school people make good educational programs even better.

About 90 projects managed by NIE since FY 72 responded with useful information. Some were multi-million dollar programs in operation for several years; others were more modest--short-term policy studies, for example. Some programs were just starting or at the halfway mark and sent brief interim reports or letters of explanation. Still others were narrow in scope (a small contract to edit a manual, for instance). Thus, not all NIE career education projects are included in this publication.

After close study of these documents--from the two paragraph single-page descriptions to the 20 volumes of final reports and products--we wrote summaries of what had been learned or developed in each project that would be of value to busy educators. And to make sure we correctly understood their work, every project director was asked to review the summary for accuracy and return it, with comments, if possible.

Many questions about career education addressed in these research and development efforts were ones we had heard before; many new ones were generated by project personnel as they worked on getting answers to their initial research questions. And, of course, there will be even more as results of research and development now underway or on the drawing boards are disseminated.

This book deals with some of the questions career educators usually face. Not all of these can be fully answered yet. Researchers and developers

don't always agree on the answers either. But each time answers are sought the understanding of the complex issues of the education/work relationship is increased.

Should you want to know more about the research and development agenda of NIE's Education and Work Program, ask the Institute for its most recent Forward Plan on this topic.

There are two groups of questions: "Where Are We Heading?" and "How Will We Get There?" The first deals with some of the issues that need to be kept in mind as programs are being developed. The second is more operations-oriented--the concerns that affect the day-to-day delivery of career education. The responses are drawn from the materials we read and number-coded to indicate the specific projects which produced the answers.

The largest portion of this guide features the abstracts or summary descriptions of all the contracts and grants. They have been alphabetically ordered, then numbered to make them easier to locate. Products available are also noted. If you need more details on a project or its products, contact the original source or NIE directly.

As you read this publication remember that:

- No evaluations or judgments were made about the value of the studies or whether the research designs were appropriate.

- This is not a review of all literature written about education and work--just that managed by NIE's career education staff since 1972.

Some of the information you'll find here will corroborate your own experiences and some will

hold new ideas from the researchers and developers that will be helpful as you continue to work with your career education program.

Larry McClure
Northwest Regional
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I. WHY THE EMPHASIS ON CAREER EDUCATION?

Career education became a national priority in 1971; yet no one set of program guidelines predominates--still, people planning career education programs clearly need some kind of roadmap to follow.

Is there a single definition of career education?

Put a dozen people in a room to come up with a common definition of career education, and the discussion may well get hung up in semantics. Yet any career educator will agree that a major concern is preparing persons for work and developing skills to make work experience productive and satisfying. No matter what the philosophical bent, one thing is essential: Work out your own understanding of what your program is about and specify its goals and objectives on paper. Remember that a workable routine can be built from a variety of points of view and that no one program will do the job in all situations.

That's why NIE's development activities in career education offer a wide range of alternatives for local planners. These pilot projects recognize that career education must be closely tied to the unique needs of each community. Yet despite individual variations, certain consistent goals for career education emerge in all programs.

See: Abstract Numbers 30, 33

What are some of the common goals and objectives?

A number of programs have come up with common goals and objectives. For example, the *Comprehensive Career Education Model (CCEM)*, initially implemented

in six school districts throughout the country, offers widely quoted goals and objectives for infusing career education into an existing school curriculum.

But no program's goals and objectives for career education are as comprehensive as those guiding the *Mountain-Plains* program where entire families are involved in learning experiences designed to shore up a variety of survival skills for today's world. Some of the long-range goals that shaped these and other career education programs are:

- Help people make better career and life decisions.
- Help young people learn what it's like to be an adult--to "try on" some roles in a safe setting.
- Help people acquire basic competencies for survival in a changing economy.
- Help people learn how to influence the workings of the economic-political-social system in which they live.
- Help people learn to support themselves by working and to understand the value of work for the individual and society.

See: Abstract Numbers 30, 33, 53, 66

Will career education programs be retained?

Career education is a durable innovation according to a study of high schools accredited by the North Central Association of Colleges and Schools. Career education programs were adopted by 52 percent of the 3,271 schools surveyed, while only 0.6 percent had abandoned the practice. For schools with career

education programs and fewer than 200 students, the practice had never been abandoned. Reasons cited by schools that did give up on their career education efforts were:

- Staff problems such as lack of leadership, inadequate training of teachers, lack of inservice, lack of support by teachers or central office administrators

- Financial problems, especially for schools with already low per pupil funding levels

What makes career education more durable than other innovations? With "education for all" identified as a national emphasis, career education is viewed by many as an important means of meeting that goal. Some even urge that career education be renamed "education for living," since what it teaches influences people in more life roles than just that of worker. Studies indicate that such problems as youth alienation could be treatable, in part, through the kinds of actual work-related experiences career education encourages.

Packaged techniques provide the teacher easy access to needed materials. For district leaders wondering if career education will be here today and gone tomorrow, the first three years are most important. Should the practice be in use beyond three years, the chance of it being retained are markedly improved.

See: Abstract Numbers 5, 30, 31, 33, 42, 63

II. WHO IS CAREER EDUCATION FOR?

Career education can be valuable to just about anyone, and so it's never too early or too late for people to explore their career and lifestyle options.

Should career education be included in early childhood education?

We know that early childhood is a critical learning period. What research also tells us is that by the age of 5, preschoolers acquire definite impressions about the world of work, such as the appropriateness of certain careers for men and women and the kind of prestige occupations have. Much of this information--communicated via parents, friends and the media--makes such a strong imprint on children that it plays a major role in determining future choices, including career choices.

Since stereotypic information is picked up early, many educators strongly recommend introducing career information while these initial concepts are still forming. Early career awareness can help children understand the importance of work. It can also point out the broad range of career possibilities available without requiring children to make early and uninformed career decisions.

Researchers also advise that early childhood is the optimum time to begin to counter sex and race stereotyping. This necessitates using every possible means--the media, classroom activities, positive role models--to make boys and girls aware that one's sex or race has nothing to do with competence to do a job or follow a particular career. By beginning early there's hope that stereotypes will not become so entrenched that later career education is

ineffective in promoting choices based on personal abilities and interests.

See: Abstract Numbers 17, 18, 65, 68

What place does career education have in the elementary school?

The elementary years are the time to begin introducing an awareness of careers--the first stage of career education. As any elementary teacher knows, youngsters are "trying on" career roles at that age, and it is an ideal time to help them form attitudes about why people work, what makes for job satisfaction and how men and women find careers for themselves.

Curricula developed for teachers of grades 1-6 urge them to provide elementary school children with activities that concentrate on developing awareness of personal interests and goals, of career opportunities, of what specific occupations involve, and of important attitudes and skills needed in life and work--including a positive self-image and the ability to make responsible decisions.

The most compelling reasons for introducing career education in the elementary years is that children have already begun to make career-related decisions based on what they are experiencing. So career awareness activities can be effectively interwoven into many classroom activities--social studies, mathematics, reading--and involve boys and girls in relating classroom activities with the world through observing adult roles and understanding the significance of work in people's lives.

It's important to remember, though, that self-awareness lies at the center of all these activities. Too often, caution researchers in many studies, decisions affecting a lifetime are made without understanding personal values and interests.

Emphasis should be placed on helping students deal with their feelings about careers and jobs as well as finding out what people do.

The continuing challenge for school people is to help every child achieve as much as possible and keep every door open. What elementary schools can also do, urges another study, is to stay alert to the "turning off" behavior signals which may mean dropping out later on.

See: Abstract Numbers 13, 17, 18, 19, 21, 46, 49, 56

What's the place for career education in secondary programs?

Most everyone agrees that a first-hand look at how people earn their living is preferable to reading about it in a textbook. And although acquiring general information about careers is important, there's a lot more than that to career exploration and preparation.

In school or at workplaces in the community career education gives the student a chance to practice and develop skills that will remain valuable for a lifetime, such as:

- deciding what information is needed, getting the information, evaluating and using it
- assessing personal values, interests and abilities and how these relate to better career and life decision making
- learning effective interpersonal skills and developing a sense of self-reliance and personal competence

Career exploration is occurring both on and off campus in many programs like *Experience-Based Career Education* and the *Comprehensive Career Education School-Based Model*. Students are assisted in these programs in a number of ways:

- They explore career possibilities that relate to subject areas like mathematics or biology.
- They learn the specific work skills that a particular profession demands via first-hand encounters with community resource people.
- They experience working at a particular workplace.
- They have access to special courses that help them discover their career interests and improve their decision-making skills.

See: Abstract Numbers 5, 9, 11, 33, 54, 66

What value does career education have for students?

In the '70's college students are faced with increasingly uncertain career futures. Although the college diploma is still a plus in finding a satisfactory career, college graduation no longer offers immediate or certain entry into well-paying professional positions. Recent economic downswings plus a tremendous increase in the numbers of available college graduates have changed the forecast of job availability. Recent graduates are finding a decrease in the number of professional jobs, a drop in starting salaries, a relatively high rate of unemployment (an even higher one for those with humanities or social science degrees), and a decline in the rate of growth in the economic benefits from completing a college education.

All in all, the changing conditions for college graduates--especially the very real possibility that they may not find work directly related to their college training--point to an increased need for students to take a hard look at their career goals and objectives. Many students do little realistic preparation for their futures. Over half wait until graduation or later to determine career directions. And to date most colleges have placed little emphasis on helping students analyze their career decisions or relate academic interests to career possibilities.

So with college costs continuing to climb, and competition in the job market increasingly keen, students can be expected to demand more from their college years, including experiences that help them to explore personal goals, determine career alternatives, and integrate academic interests with future life and career directions.

See: Abstract Numbers 20, 23, 39, 60, 67, 76, 78

What can career education offer adults?

The day when one took a job and stayed with it for the next 40 years is gone. Career change is a fact of life for many American men and women, and in today's fast-paced society, individuals may hold five or six different jobs during a lifetime. Few remain in a single career for the course of their working life.

Many adults are finding career transitions--from career to career, from home to career, or from career to retirement--arduous, frustrating and demanding. Old skills need to be retooled, new career opportunities identified, personal values and interests clarified, and career or leisure plans formulated and implemented. As a result, career education and career development programs

have become increasingly in demand among the adult population.

In recognition of adult career education needs, NIE has initiated and supported a number of model efforts, such as:

- a career education program for rural, disadvantaged families, including specific job-skill training, assistance in basic skills, personal and career counseling and services for the entire family
- a counseling program for home-based adults (predominantly women) using the telephone to assist clients in identifying career and educational options
- a career education program for a correctional institution
- a program developing strategies for counselors working with women, and another helping women find opportunities in the skilled trades

These and other approaches recognize that career education programs need to be made more accessible to adults, that more needs to be known about adult career decision making, and that career education is vital for coping creatively with the differing stages of adult life.

See: Abstract Numbers 2, 11, 34, 39, 53, 60, 62, 63, 77, 82

Can career education help those with particular needs?

Many voices say "yes." In Philadelphia's inner city neighborhoods, the *Career Intern Program* is

working with young people who were in serious academic trouble in the regular school system. Within ten weeks of entry into the program students' academic self-images often turn around--they begin believing they can finish high school and acquire the skills and abilities needed for a career.

What about women? Nine out of 10 U.S. women will work at some time in their lives. As women's participation in the labor force increases, more women and girls have important career decisions to face. Career guidance can help them expand their options, make informed choices and--for those who need it--provide assistance in planning for the dual role of homemaker and worker.

Ethnic minorities and women often have high aspirations. Career education holds the potential for helping identify and overcome obstacles to realizing those aspirations, preparing individuals to counter discrimination and lack of self-confidence.

An NIE case study of *Operation SER (Service, Employment, Redevelopment)*, in Orange County, California, for example, describes Chicano people bridging the gaps created by language and cultural differences, lack of specific job skills and personal self-confidence, and chronic unemployment and underemployment.

At the *Trainable Mentally Handicapped School* in Phoenix, Arizona, for students aged 12 to 18, emphasis is on preparation for an occupation. Youngsters work on a mock assembly line to understand how it will be when they're on their own and working to support themselves. And in Audubon, Minnesota, retarded and handicapped students are gaining job-entry skills and "Lifemanship Skills" training, aimed at preparing them for independent living.

See: Abstract Numbers 9, 11, 13, 21, 65, 82

III. HOW DO WE MAKE SURE CAREER EDUCATION IS SEX AND RACE FAIR?

Recent years have seen the passage of civil rights legislation. But, although the laws of the land direct that there be equal employment and educational opportunities for all, there's a lot of work to be done to make those goals real for all Americans. Career educators are front-line personnel in this drive for equal rights.

What do we know about the effect of sex-role stereotyping on career choice?

Although the number of women workers is growing, a disproportionately large percentage of them continue to be hired into low-prestige, low-paying and relatively transitory occupations. As many researchers have noted, sex-role stereotyping is a major factor influencing these career choices. A recent survey of 1965 college graduates points out that the greatest percentage of women graduates selected a teaching career, usually describing their positions as having neither authority nor policy-making power. Another study notes that women who seek more administrative responsibilities in education are often frustrated--few are hired. In fact, the number of female administrators has been on the decline, dropping in some states by as much as 50 percent, as administration increasingly becomes a male domain.

Some examples of how and when stereotyping in schools occurs are blatant. For instance, a counselor suggests low-prestige, traditionally female-dominated occupations to a girl, while recommending a wider variety of higher-status occupations to a boy--although the youngsters' grades, coursework, abilities and skills are the same. Then there are the subtle ways, such as curriculum materials which show white males as

strong and competent authorities on the job and women as the smiling and supportive helpers--excluding minority persons altogether or casting them in service roles.

The fact is, girls and women are not usually encouraged to have high career aspirations or achievements. They limit their career perspectives at an early age, and by elementary school their career interests usually fall into two familiar categories--teacher and nurse.

The number of boys' career preferences, on the other hand, are usually two or three times greater than those of girls at the same age. Boys consistently cite professions with high prestige and power. In career selection, a seldom recognized fact is that girls seem to face a double dilemma--a fear of failure and an equally strong fear of success.

Researchers and product developers agree that one way to keep sex-role stereotyping from limiting people's career options is to actively and unrelentingly counter it in the classroom, in counseling and wherever else it occurs.

See: Abstract Numbers 13, 17, 18, 21, 31, 44, 45, 58, 61, 65, 68, 78, 82

How can we combat racism and sexism in the career guidance process?

In the 1970's there are still many factors which contribute to race and sex stereotyping: Early socialization, parents' attitudes, teachers' attitudes, school curriculum and materials, the media, counselors' biases, hiring and promotional practices, economic discrimination and other societal pressures.

It's easy to see blatant examples of racism and sexism in some career education materials, but the subtle yet damaging messages in certain guidance practices or interest assessment tools demand continuing vigilance on the part of teachers, counselors and educational administrators.

Epie's *s*e*t** advises close analysis of all written and visual content when selecting any materials for school use. The review panel should include minority group representation in order to heighten sensitivity to discrimination issues. Volume I provides a step-by-step, "how-to" guide to assist school people with the critical process of identifying both covert and overt sex and race stereotyping.

The debates over what constitutes "fairness" in career guidance, particularly in interest measurement, are presented in *Issues of Sex Bias and Sex Fairness in Career Interest Measurement*. Interest inventories should be used to broaden the exploratory options for both sexes, encouraging people to investigate as many careers as possible. Counselors need to be aware of how their own biases might affect interpretation of inventory results for males and females alike and whether they fall into the traps of:

- recommending that women and men choose conventional female or male-dominated professions
- suggest less prestigious or demanding career options to women and minority members
- advising individuals on the difficulties in entering nontraditional professions rather than preparing them to combat discrimination

Assistance in helping recognize biases is offered in *Sex Fairness in Career Guidance*, a learning kit

for use by counselors and counselor educators. It introduces the traditional family and occupational roles for both sexes, how things got that way, the consequence of the status quo and current challenges to the system. Recommendations for changing present practices are made. A "Resource Guide" lists supplemental materials and organizations and agencies which provide information and assistance.

Other advice? "Start early!" is the message of one study. By the early grades, girls and minority children seem to know they have limited options--they aspire to a far narrower range of occupations than white boys. Boys are expected to develop technical and practical competencies; girls develop interpersonal sensibilities and skills. Minority children don't see minority group members represented in career-related materials and get the idea they can't do certain jobs.

See: Abstract Numbers 8, 13, 17, 18, 21, 44, 45, 61, 71, 82

How can we change staff attitudes and break free of stereotyping?

Old attitudes die hard, but that must not become an excuse which allows school people to perpetuate the stereotypes that limit a student's life role and career options. A major first step toward changing biases is to increase sensitivity to the issues and to all factors that contribute to sex and race stereotyping.

Some suggestions offered by career education practitioners:

- Set up small group sessions for staff to examine their own concepts of masculinity and femininity, their value structures, their attitudes about race and socio-economic

status and respond to these issues in everyday interactions.

- Work out written strategies to facilitate helping students overcome their own stereotypic race and sex attitudes.

- Examine existing materials and reconsider those which show women and minority group members in stereotypic jobs and roles, or which fail to adequately represent them.

- Seek out and use materials and adult role models which show that men and women can successfully fill nontraditional roles and jobs.

- Encourage young people to broaden their personal horizons and explore a wide range of career options; and suggest nontraditional jobs to both men and women.

See: Abstract Numbers 2, 8, 10, 13, 44, 45, 49, 58, 66, 68, 82

IV. WHAT SHOULD SCHOOLS TEACH ABOUT THE WORLD OF WORK?

Schools have taught subjects like English, mathematics, and science for decades--and the need to link the subject matter to the working world still exists--along with lessons on how to find a job, keep it and advance in a career.

Should we stress job-specific skills in career education?

There are two schools of thought and no pat answers. One urges that specific, marketable skills be taught on the basis of their tangible, immediate benefits and the absolute realism of the experience with the world of work that they make possible. The other holds that students will fare better in the job market if they are taught generalizable skills and helped to develop the personal traits employers look for, such as a sense of responsibility, competence and so on.

In Minnesota, a followup of graduates of office courses using three different teaching/learning strategies indicates that specific skill training made their on-the-job performance comparable or better than that of the norm groups. This same study shows that the emphasis on specific skill training may not result in the best employee. The graduates rated below other groups in personal adjustment and in coping with on-the-job relationships and everyday stresses and strains of working.

Some persons argue that jobs for which high school people can be specifically trained offer low pay, low status and little chance for advancement. Still others say that school-offered specific skill training forces young people to make career decisions too early--before they have acquired sufficient

self-knowledge for a good "match" between themselves and jobs. And that's part of the rationale for the second school of thought--that more than job-specific skills, students need generalizable skills--in math, in writing, in critical thinking, in interacting with others, in understanding bureaucratic systems, and in gaining a sense of personal responsibility and commitment.

In considering this issue career educators should not lose sight of realities like these:

- Technology and the economy change so fast that skills become obsolete and new ones are in demand within a comparatively short time frame.

- There are conflicts between the various American beliefs in relative independence, the work ethic, free enterprise, the guaranteed annual income, government or private ownership of essential industries and services.

- Many people today are dissatisfied with their jobs and careers in one or more major respects. Credentials such as diplomas no longer guarantee jobs to those who hold them, nor do they mean long-lasting job satisfaction.

- The general public strongly supports free, compulsory public education--and expects a lot from schools for college-bound and non-college-bound young people alike.

- School finance is in a "crunch" between higher costs and attempts to keep from increasing taxes and is likely to remain so for the foreseeable future.

It may be that well-thought-out, well-planned combinations of skill-building experiences in school and in the workplace will prove the most effective in helping students gain both the job-specific and the affective skills that are needed to ease the transition from dependent adolescent to independent adult.

See: Abstract Numbers 19, 20, 22, 23, 25, 26, 30, 33, 42, 52, 55, 59, 60, 67, 71, 75, 76, 78

What information about the non-pay benefits people derive from their jobs should be included?

Students need to consider that, for many people, the quality of work situations hinges on intangibles that can't be valued in monetary terms. Career education--using techniques like *Simulated Occupational Choice*--can increase students' self-understanding so they can determine where their values lie and what's important for them to gain from a job.

Public employees, for instance, think that opportunities to make friends on the job, receive quality supervision, and the ability to decide how to do their work are very important. Supervisors cite lack of promotional opportunities, lack of opportunities to learn new skills, lack of recognition for their work and the inability to have an impact on how things are done as causes for their own dissatisfaction. It's hard to place a dollar value on these things since they aren't for sale; but many groups, including labor unions, are becoming aware of the intangible qualities of work and are urging job redesign.

If a young person decides that job security, prestige and greater on-the-job responsibility are priority rewards from a job, then a college degree

and a job in a large company offer a better guarantee for receiving those "goodies."

Generally, America's labor force is becoming better educated, and better-educated workers place greater importance on work-related opportunities to improve their skills and on finding jobs that challenge them. The other side of the coin is that many workers don't have chances to use the skills they already have and therefore don't feel satisfied with present jobs.

Increasing students' self-awareness, clarifying values, and providing opportunities for students to get involved in the realities of the workaday world can be the key to helping people know what non-pay benefits are important for their employment futures.

See: Abstract Numbers 22, 23, 30, 42, 55, 59, 64, 69

Is education still the key to finding satisfying work?

While some researchers urge caution in advocating education as the answer, most studies continue to affirm that education does pay off. But while it gives one a better chance to find a satisfying occupation, it certainly doesn't guarantee it.

Students need to know that the last ten years have seen a decline in economic benefits derived from higher education--a fact that provides further justification for youth to carefully assess the training options available to them. On the other hand, many employers still look to the applicants' years of education as a measure of ability to do the job. Education pays off particularly well for women and minorities. In one survey, women's hourly wages increased by seven percent for every year of education completed.

A woman's college degree returns more earning power than a man's, too--if she can get the high-powered job in the first place. And well-educated minorities are finding an increasing number of professional and managerial positions opening up.

According to other studies, the "credentials effect" still operates strongly, and the years of education in high school or college often don't pay off very well unless a diploma is earned. Workers with more training usually make more money, but one report cautions that they also tend to enjoy fewer non-pay benefits. As salaries go up with increased responsibilities, other rewards often diminish--fewer close friends on the job, less praise for the work done and fewer opportunities to learn new skills. Also, high school dropouts will probably find it tougher to get jobs--they are about six percent less employed--than those who stayed to get a diploma. But diploma-holders and dropouts seemed to find about the same satisfaction in their jobs, and make similar salaries during the first five years after leaving school.

One study also points out that education is tied into how well people grasp the basics of our shifting economic system and adjust their activities appropriately. So there is evidence even in the sphere of economics that education improves one's problem-solving skills, one's ability to deal with the changing nature of the labor market, and one's distribution of personal time. Apart from that, students need to know that education does make it easier to get past the employment interview and into the job, but employers are increasingly looking for specific preparation and experience. Those with a broad general education, particularly in college, often find it frustrating to tie that into the job they want.

See: Abstract Numbers 19, 20, 22, 27, 31, 59, 60, 67

V. WHAT DO WE AS EDUCATORS NEED TO KNOW ABOUT THE WORLD OF WORK?

Educators share responsibility for helping youth gain realistic understandings about the working world and for communicating that knowledge to young people before they leave school.

What changing conditions should educators and students know about?

The pace of change is increasing in the world of work as everywhere in society. And although there are differing interpretations about the nature of that change, studies point out that potential workers and educators should be apprised of the following:

- Persons are seeking increasingly creative and stimulating jobs--more than there are positions to be filled--so competition in the job market is keen and will continue to be so.

- Employers are demanding higher educational attainments, abilities and specific job preparation.

- Professional job prospects for women and minority groups, particularly in the public sector, are on the increase.

- Workers have become noticeably dissatisfied in some industries with the lack of quality work environments and are insisting that jobs provide more challenge and more opportunities to develop new skills.

- A number of major firms are experimenting with greater worker participation in

decision making and job redesign, both of which may require different kinds of workers in the future--those who are more flexible, responsible, and team oriented.

See: Abstract Numbers 23, 24, 29, 52, 59, 67, 77, 78

Does more education assure an equal choice of finding a good job?

The highly optimistic view that education paved the way to success has not only been reassessed but also seriously criticized in the past decade. Questions have been raised about whether education is really the great equalizer. As continuing social inequalities for some members of society have been spotlighted, it becomes apparent that education is not the only factor operating in determining one's career potential.

Many studies point out that schooling neither guarantees a good job nor provides for social mobility. In one study of two-year public and proprietary colleges, results indicate that schools were not successful in overcoming inequalities of social background, race or sex. Class and income differences tend to be maintained despite additional education. Moreover, social class and race does influence the choice of schooling and occupation. Lower socioeconomic status students are definitely less likely to enter graduate schools or high-status, well-paid professions. And a study of the effect of college on women from working class backgrounds shows that despite having earned degrees, graduates tended not to realize their career potential. Factors such as repeatedly choosing traditional and often overcrowded feminine occupations interfered with achieving real career success.

This is not to say that education makes no difference. It does. A woman's college degree will return more earning power than a man's if she can get hired into a position of responsibility and authority. But realistically, both women and minorities have had difficulty in getting into the higher-status, higher-paying positions. Even in the field of education, women find resistance to their advancement in educational administration. In New York state, for example, where the number of women principals and superintendents has decreased by 50 percent in 17 years, women found it necessary to build their own internal information network to combat increasingly limited opportunities for women in educational leadership.

Education may open some doors, but social class, race and sex still limit individuals' chances to find the good job they may be more than qualified to fill.

See: Abstract Numbers 18, 19, 21, 28, 31, 61, 67, 76

How are changing work roles affecting families?

Dual work roles for husbands and wives are occurring with greater frequency in American families. And the pattern is on the increase as women will probably comprise at least half of the 1980 work force.

An in-depth study of 14 families pointed out that a wide range of solutions are being tried by husbands and wives in their efforts to accommodate changing work responsibilities, in and out of the home. More and more husbands participate in child-rearing tasks as well as in household maintenance. But despite the sharing of tasks, most husbands continue to view their work role at home as "helping out." Wives still carry the real burden of responsibility for home and children.

While working husbands are modifying their behaviors and assuming greater family responsibilities, in most instances they are not substantially changing their role expectations and remain ambivalent about the new demands placed on them. Their ambivalence has a continuing impact on the working wife:

- Wives feel caught in the bind of taking on a double work load. Many need help in finding more equitable solutions to dual work roles which often make active career development a difficult proposition.

- Stereotypic attitudes about the proper roles for men and women are hard to escape, and many wives take on jobs with little responsibility and no chance for advancement in order not to disrupt family balance.

See: Abstract Numbers 24, 83

VI. WHAT ABOUT HANDS-ON LEARNING IN CAREER EDUCATION?

Career education did not invent the idea that letting persons see, feel, hear, smell, or taste some lessons about life is a good way to learn--but the concept of experiential learning runs through many of the techniques used.

What does experiential learning offer students?

When students leave the four walls of the classroom and pursue learning activities by working alongside adults in real life settings, some interesting things can happen. At least that's been the case for students enrolled in *Experience-Based Career Education (EBCE)* programs. These adolescents keep pace with their peers back on the campus in academic skills like reading, writing and math; and at the same time they learn a lot about themselves, about what jobs are like and basic survival skills--talking easily with adults, being responsible for their own behavior and the ways learning relates to life. Students, parents and volunteer community resource persons who've been involved say they would not trade the *EBCE* experience for anything else.

While *EBCE* represents one unique experiential approach, it is certainly not new nor the only one around. The *Urban Career Education Program* uses a community-focused learning model in its *Career Intern Program*. Students in this program are paid for on-the-job training and earn their high school diploma or GED while working.

Four important benefits of educational work experience, only one of which relates to job preparation, are often cited: (1) increased self-reliance, assertiveness and interpersonal skills,

(2) ability to handle responsibility, (3) understanding of career requirements, and (4) familiarity with how bureaucracies work. In Sweden, off-campus experiential learning is considered so important that all mid-teens spend two weeks in some kind of work experience. Subject matter teachers build on these opportunities to make academic learning reality oriented.

Used effectively, experiential learning offers a solid opportunity for students to stretch their abilities and understanding of themselves and of careers. Besides that, it gives students a chance to work with adults whose reinforcement often affects their career paths for years to come.

See: Abstract Numbers 2, 9, 11, 26, 32, 33, 42, 46, 55, 75

Will any work experience do?

Most educators who are committed to the idea of experiential learning answer "no" to this question. True, nearly any community workplace can give students a first-hand taste of the joys and frustrations, the successes and pressures of working that would be hard to duplicate in the school, but many researchers and practitioners are saying that the quality of work experience is extremely important.

While almost all workers use skills young people can practice during work experience--reading, listening, writing, following directions--the maximum benefits won't be gained unless the work experiences are carefully designed. Too often youth are placed in make-work situations, doing menial work tasks.

Although worthwhile work experiences may be hard to find and hard to plan, the effort pays off

when students:

- receive useful supportive feedback on how to do a job better
- learn to be responsible
- prepare for meaningful and useful careers
- understand how society works and how they can help improve it

All in all, young people need from their work experiences the same things adults expect from their careers--opportunities to participate in important decision making, to fulfill socially useful roles, to find satisfaction, and to relate to other competent persons.

Problems can be avoided by planning the experience so that both students and cooperating employers know what to expect, so that the students understand how their work is useful to the employer and the community, and so that as many learning opportunities as possible are integrated into the time students spend in the workplace.

See: Abstract Numbers 3, 33, 42, 55, 77

What's the best way to involve the community in experiential learning?

Make a good case to the employers and other community resource people whose help you need. Business, labor, professional, the self-employed, government agencies, service organizations--just about anywhere you look in a village, town or city--there are people who will help youngsters learn some valuable lessons about life and work. These persons tend to say "yes" if several conditions are met:

- Make a clear explanation of what you want.
- Point out what's in it for them.
- Tell them where to turn if there's a question or problem.
- Provide feedback on how well their involvement worked.

More and more career education programs are finding interested support when asking for community help, but the approach must be systematic and carefully planned. Remember to help cooperating employers avoid giving students menial tasks to perform and to help them trust young people's ability to be responsible. In addition, recruitment and orientation of community resource people requires forethought and planning since requests school people make have to compete with other demands on employers' time.

See: Abstract Numbers 9, 11, 33, 42, 72, 75

Should students be paid for the time they spend at work sites?

There are differing opinions on this complex issue. The pro-pay people say the promise of a paycheck--even though the work was done during school hours--is a learning experience in itself. The anti-pay side believes off-campus experiences that earn educational credit should be considered an extension of the school classroom, and since students are not paid to attend school, they should not be paid for learning under supervision elsewhere. Either way, employers generally wish to avoid red tape and seldom if ever seek compensation for lost time or materials. Unions, on the other hand, believe that persons should be paid for the work they do--no matter what.

It's the mechanics of paying students that worries some employers. Or it could be the threat of government intervention in the private sector, which would be troublesome to business people, particularly if work experience/study programs are federally financed.

Programs like *Experience-Based Career Education* handle this sensitive issue by designating work site experiences as productive learning rather than productive work. Students are encouraged to become involved, to participate because of the opportunities for learning. If only the employer benefits, the student should continue learning at a better work site.

See: Abstract Numbers 9, 33, 55

VII. WHAT ABOUT CAREER DECISION MAKING AND GUIDANCE IN CAREER EDUCATION?

Of primary importance in career education, guidance is the shared responsibility of counselors, community resource persons, teachers and parents alike. All participate actively in helping students understand themselves, gather career information and decide on occupational alternatives.

How can guidance programs be strengthened?

Those who take on career guidance responsibilities need support while they are working to improve things for students. Much can be done without great expense. School counselors who participated in one study recommended more inservice training in guidance for counselors and teachers alike. Learning how to make more effective use of existing materials and resources was judged as critical to improving guidance for youth and adults.

Students surveyed by the same researchers said they wanted more up-to-date information on specific educational and vocational opportunities, additional real-life job experiences and preparation for finding the first job.

Other studies back this up and went on to suggest that parents and community persons who work with students be included in some of the schools' career guidance training sessions. There are implications drawn from the experiences of the persons who developed such programs--*Experience-Based Career Education*, the *Career Planning Support System*, the *School-Based Comprehensive Career Education Model* and several others--which point directly to the value of extending guidance training:

- Since community persons in the workplace and those who certify students' life skills

competencies provide strong role models and can influence career decisions, they need to understand the guidance process.

- Teachers and parents are usually in closer contact with students and, with training, could help spot problems early--before they culminate in actions such as dropping out of school.

- A variety of role models can be a positive thing if school people and parents help youngsters see that they are observing many different adult "ways of being" which they must weigh against their own values.

A point which bears repeating is that guidance can be a positive help, and therefore a stronger program, when it helps minority persons and women--indeed any disenfranchised group--to set and reach higher goals.

See: Abstract Numbers 2, 4, 8, 10, 19, 28, 30, 33, 44, 60, 66, 69, 83

How are we making career decision-making easier?

Finding the right career is not easy nor is it often very logical. Many times factors like "who you know" and "being in the right place at the right time" or your race, sex or social status play a greater role in determining careers than more significant issues like values, interests and abilities. But present knowledge of decision making and career development points out that there are tools and approaches that people can use to sort out their options in a more meaningful fashion.

A review of career decision-making theories notes that by using various media, games and simulation

See: Abstract Numbers 3, 4, 10, 13, 17, 18, 19, 28, 37, 42, 44, 49, 55, 69, 75

How can we make better use of job market information?

Since transition between education and work implies jobs available when schooling is over, it seems logical that labor market data should be fed into educational planning and career guidance. The problem is that the statistics available are sometimes so outdated, complex or based on state or regional reports that they get shelved more often than used. Although labor market analysts are working on ways to make occupational information more useful to educators, recent studies point to some immediate actions you can take to give students up-to-date career information.

- Set up some linkages with employment counselors in your locality. Get information on job forecasting they receive and tie that into your guidance program.

- Arrange for coordination of effort, as suggested in a College Entrance Board Study, by setting up local education and work councils to facilitate better exchange of information.

- Use community people to give students an accurate picture of what a job actually entails and the skills it requires rather than the academic credentials students need in order to be hired.

See: Abstract Numbers 24, 51, 52, 60, 71, 77

What about the influence of parents and other adults?

Researchers and teachers alike know that parents have a strong influence on the educational and career aspirations of young people. Daily interaction between parent and child from birth through adolescence affects self-concepts, career "imprints", and ultimately career decisions. A Harvard study urges educators to involve parents in a partnership so that children will gain positive, nonstereotypic attitudes early about the world of work and will aspire to maximize their potential, whatever that might be.

Fathers' occupations weigh heavily on their sons' career choices. Mothers' occupational attitudes on the other hand, have greater impact on their daughters' career plans than the mothers' actual occupations. This suggests a need for programs which help parents use this strong influence on children's career choices in a more creative manner.

Encouragement by peers, educators and other family members impacts on an individual's occupational and educational preferences, too. Research on career decision making points out that young people are sensitive to the positive and negative reinforcement offered by respected adults. Adults can be important role models, too. For example, a woman who successfully combines career, marriage and motherhood can help a young girl realize that the same option exists for her. Similarly, a black lawyer or physician can help a young black person set sights on higher-status positions.

By increasing educational work experiences for youth, students can observe and relate to a variety of influential, competent adults--thereby learning work requirements, discovering a variety of life

and work styles, and gaining interpersonal communication skills and responsible social attitudes. *Experience-Based Career Education (EBCE)*, the *Career Planning Support System*, the *Career Intern Program* and the *Management Internship* program are a few of the many examples of NIE programs aimed at helping students do precisely that.

See: Abstract Numbers 9, 10, 11, 17, 18, 30, 32, 33, 42, 49, 65, 82

What about TV and other delivery systems?

The broadcast media has a real impact on children. Television in particular is so accessible that it has the potential (although still largely unrealized) to introduce many occupations and to straightforwardly negate racial and sex-role stereotypes. Unfortunately, few present programs do--there continues to be a real dearth of positive role models for minorities and females.

While programs specifically for children are more sensitive to portraying both males and females and all races as competent to fill a wide range of roles and occupations, they still fall short. Few explicitly confront stereotyped occupational assignments--which is precisely what is needed to debunk the myth that women and minority persons perform less effectively than white males.

Nonetheless, media used purposefully can facilitate good career decision making. Two recently developed documentary films, "Girls at 12" and "Cloxae and Albie," for example, use real-life situations to explore issues such as society's expectations for men and women, and whether being a woman allows room for having a career.

Another study pointed out that using videotapes of career women as competent role models has

considerably more impact on raising student horizons than discussion methods or role playing techniques. Again and again the studies urge that students have opportunities to observe and interact with individuals successfully engaged in nontraditional careers. The exchange can be the most effective means of helping students explore their own aspirations and expectations.

See: Abstract Numbers 17, 18, 28, 65

VIII. IS THE ROLE OF COLLEGES AND UNIVERSITIES CHANGING?

If career development is indeed an ongoing experience not ending at high school, then postsecondary institutions like colleges and universities must acknowledge their share of responsibilities in preparing people for living just as much as any other agency.

Should colleges and universities provide career education, too?

Imagine completing a master's degree, graduating with 350 other eager job seekers and finding that only 12 jobs requiring your unique skills exist in the entire country. Unfortunately, this frustrating experience is not unusual.

Students immersed in academia often remain distressingly unaware of career possibilities in their major fields. While higher education institutions are just beginning to accept their career development obligations, students still seek employment largely unprepared for the realities of the labor market.

One study assessing the usefulness of postsecondary education in careers highlights the need for vastly improved career education in all colleges and universities. Among 8,000 graduates surveyed, there was little relationship between the college major and future employment. Over 50 percent of the graduates waited until graduation or later to make career decisions. As a result, much of the time spent during college was unrelated to developing abilities related to future career plans.

College graduates with liberal arts or social science backgrounds and no supplementary practical

courses found themselves in particular trouble, sometimes joining the ranks of the unemployed or underemployed. For graduates unable to find work in their area of interest and training, job dissatisfaction increased measurably.

Better career information at an early stage as well as attention to developing student self-awareness might help prevent individuals--particularly women--from choosing the popular but overcrowded occupations. If students were more in tune with labor market realities, had work experience to develop their skills and interests and further work-related competencies, and practical information on how to make their college experiences transferrable, higher education would be even more of a plus for young men and women than it is today.

See: Abstract Numbers 28, 55, 59, 65, 77, 78

Is college preparation any guarantee of success?

It used to be true that "the more education the better". But in the 70's, researchers are saying, "not necessarily so--it depends on what you want out of your job". There is no longer any assurance that college graduates will find jobs commensurate with their expectations. And, in fact, all too many graduates--especially those with general humanities and social science degrees--are presently finding few if any jobs open in their fields of specialization. Many others have discovered that their beginning salaries are not significantly higher than those of their peers who decided not to invest four additional years in college.

Still, college education does give many an advantage in getting higher-status and better-paying jobs. As an example, education does pay off for some women--for every year attained, hourly wages

increased by seven percent. And, while education has no direct effect on job satisfaction, it does help one get generally better and hence more satisfying jobs. Interestingly enough, no real payoff from college was noted unless a diploma was earned.

For those critics of education who decry the questionable economic payoff of a college degree, others retort that it's ridiculous to expect higher-paying jobs for every college attendee regardless of energy, motivation and skill. Moreover, some of the fault of undue emphasis on educational requirements rests with employers as well as educators. Employers all too often describe a job in terms of educational requirements rather than skills needed. Years of education are not necessarily a measure of one's ability to do a good job; yet employers, particularly in large firms, persist in selecting employees on the basis of educational attainment rather than individual skills.

In short, while education does not guarantee success, it does give most competent, skilled and intelligent individuals a "solid foot in the door."

See: Abstract Numbers 31, 59, 60, 62, 64, 76, 78

IX. HOW ARE ADULTS BENEFITING FROM CAREER EDUCATION?

A look at the statistics on unemployment, underemployment, mid-career changes and the personal and social problems related thereto is enough to help anyone realize that adults want and need career education, too.

What have we learned about adult career education needs?

While adults face many of the same career dilemmas as do youth--identifying interests and abilities, recognizing personal goals, acquiring occupational information--they have other unique needs that require different solutions.

A major consideration for adult career education is recognizing that individual career plans are often closely tied to family needs and obligations. The *Mountain-Plains Program* has been particularly aware of this interrelationship. The curriculum serves not only the head of household, but the entire family, providing assistance in meeting personal and social as well as occupational needs. Similarly, counseling programs for women recommend recognizing and addressing the sometimes conflicting societal roles and expectations of being career woman, wife and mother, focusing realistically on helping women make thoughtful choices about the lives they wish to lead.

To do this, programs must expand services to adults: Offer life-planning, decision-making and problem-solving skills and up-to-date information on training and educational resources. For adults, recent and reliable information sources are particularly important. The old ones are often sex-biased, misleading and omit information on nontraditional options and changes in stereotypic attitudes.

In addition to resources, adults need help in developing career plans, including specific assistance in looking for a job, in preparing a resume and in finding the right training program. Career planning should also recognize that many adults have personal and financial constraints that necessitate zeroing in on an occupation early and developing clearly specified plans for achieving their goals.

See: Abstract Numbers 28, 34, 39, 63, 82

Are there any special programs designed just for adults?

NIE has sponsored two major career education projects for adults--the *Mountain-Plains Program* for low income families and the Providence, Rhode Island *Home/Community-Based Career Education Project*. Both developed unique approaches to help adults make career decisions and develop and implement life plans.

During the last five years, *Mountain-Plains* has operated a program specifically for rural, unemployed or underemployed families. Typically, adult participants have been 26 year-old, 11th grade dropouts who read and compute at an 8th grade level. All families had incomes at or below poverty level even though the majority of heads of household worked, often more than 40 hours a week.

Mountain-Plains is a unique career education effort--a comprehensive learning experience for the entire family that includes job skill training, career guidance, general educational development, personal counseling and help in finding a new career.

A second program for adults, the *Home/Community-Based Career Education Project*, developed a new

approach to counseling adults--a telephone counseling network for individuals (predominantly women) who spend the majority of their time in the home.

Over 6,000 adults benefited from this career and lifeplanning service. Trained paraprofessional counselors provide telephone assistance in making career decisions and finding local education and training opportunities. Four out of ten clients served implemented career or educational plans and considerably more were either in the midst of applying for further education or actively seeking jobs when an evaluation was made.

The program not only provided a highly usable counseling service for adults, but also developed a series of publications to guide the planning of similar adult career counseling programs throughout the country.

NIE's case studies of other successful career education programs found adults in a Texas correctional institution taking advantage of career education to prepare themselves for success on the outside. And in San Francisco, *Advocates for Women* offers Bay Area women assistance in finding new opportunities for themselves in the skilled trades.

See: Abstract Numbers 11, 34, 39, 63

Are ideas like competency-based, open-entry/ open-exit just pipedreams?

Giving credit for prior experience or demonstrated evidence of learning and letting persons come and go to and from an educational program as they're ready used to be just theory. Now, in a number of career education programs the theory has become reality.

In the *Mountain-Plains Education and Economic Development Program, Inc.* adult students are carefully assessed when they begin; they leave only after demonstrating competency in skills identified at the outset. The same general pattern holds true in the four *Experience-Based Career Education* versions.

While experimental models are proving that employers and college admissions officers are accepting evidence of competency other than the diploma, change isn't occurring overnight. Traditional programs and legal constraints still have to be dealt with. But significant breakthroughs in lifelong learning for adults are happening:

- Increased adult attendance in colleges and universities is spurring the development of external degree programs, acceptance of credit for experience and broader career development services.

- Competency-based teacher preparation is catching on and for vocational educators, an NIE project--*Performance-Based Teacher Education*--specifies how educational programs can be developed to provide competency in skills teachers will need on the job.

See: Abstract Numbers 11, 33, 38, 47, 57, 62, 63, 74, 80

How can we help people get involved in lifelong learning?

It's important in today's world to help students and adults come to think of education--indeed learning--as a lifelong process which can help people cope with our changing society and the demands it places on its workforce. By making

educational opportunities available to workers whenever they need it throughout their lives rather than confining it to certain age groups, the gap between education and work could be narrowed. There must be alternative routes by which people can gain the publicly recognized credentials that will help them get jobs, keep jobs or change jobs as the need arises.

To date NIE's research effort in lifelong learning has involved investigation into how other nations are developing recurrent education programs, public policies that promote adult learning, external degree programs, effectiveness of educational leave programs in Europe and counseling programs for adults. Some results from these projects include:

- Recurrent education is becoming an international movement which may well spark new educational systems.

- Offering opportunities to move between leisure, work and education throughout the course of one's life is viewed as necessary.

- There is a need to coordinate planning among unions, employers and universities to avoid fragmentation in the lifelong learning effort.

- Information about low tuition rates, open door admission policies and easily accessible college programs--major influencers in promoting adult participation in college--must be compiled and made available.

- A need exists for innovative degree programs that meet adult needs rather than integrating adults into existing college programs.

- Present European educational leave programs to get workers to use paid financial assistance for job development are unsuccessful, due principally to a lack of integration among supporting organizations.

- Adults need comprehensive, up-to-date counseling services and innovative approaches such as telephone counseling to make needed information accessible.

See: Abstract Numbers 2, 38, 39, 47, 62, 67, 73, 78

X. WHAT PLANNING INFORMATION WOULD HELP BEFORE WE BEGIN?

Career education programs don't just spring up by adding money and materials. They require as much careful preparation as any major innovation.

What are the model NIE career education efforts?

There are four unique career education models originally conceived in the U.S. Office of Education which were transferred to NIE in mid-1972 for research, evaluation and dissemination:

- *Comprehensive Career Education Model I* infuses career education into the total K-12 school curriculum.
- *Experience-Based Career Education Model II* emphasizes development through a comprehensive secondary school alternative that hinges on student involvement in the community.
- *Home/Community-Based Career Education Model III* features telephone counseling services for home-based adults seeking career and educational alternatives and job training.
- *Rural-Residential Program for Multi-problem Disadvantaged Families Model IV* focuses on a career development program for the entire family and specific job training for the head of household.

Each of these model programs has developed extensive documentation on goals, objectives and implementation strategies. These how-to-do-it manuals offer many good ideas with potential payoff for programs just

getting off the ground. But don't be surprised if your local version is different from the model you choose to follow. Indeed, the activities and materials that local staff themselves can easily modify and call their own will be the most enduring.

See: Abstract Numbers 33, 39, 63, 66

What's the best way to begin?

Any program planned and adopted exclusively by administrators is unlikely to succeed. While such a warning may sound harsh, it's been verified over and over again. Other tips:

- Students and parents should be involved in deciding goals and means of implementation.
- Teachers may hold one set of expectations, administrators and school boards another. Since teachers are the key users in the long run, secure their active participation early.
- Clearly designate leadership responsibilities. Don't leave them to chance.
- Conflict is inevitable but it can be healthy--even productive--if it is dealt with constructively and you're prepared to negotiate.
- Time, materials, feedback and funds are essential and should be available <u>from the beginning</u>.
- Start with schools which have strong leadership, faculty support, clear and effective decision-making patterns and receptivity to inservice training.

- Include time for teachers to plan their own training and be involved in any curriculum development.

Coordination is a key factor, too, for career education efforts which want to make good use of community resources. Where school-community relationships are carefully developed and maintained, there follows cooperation that gets good results for students.

What are teachers looking for in career education? Materials that are inexpensive, easy to use and geared to what's already happening in their classrooms. Handbooks with reproducible materials and those which give teachers flexibility in classroom adaptation are most desirable.

In general, innovations which are complex, expensive, difficult to administer, or which serve too few students, will fail. If individual teachers can develop and implement the practice without it affecting other ongoing school programs or the existing organizational framework, the innovation is much more likely to succeed. One good way to find out how well something works is to see how neighboring school districts are doing with it.

One thing is certain--there's no one program or method that's right for all students, all schools or all communities. Flexibility and adaptability are crucial and involvement of staff, community, students and parents a must.

See: Abstract Numbers 1, 6, 7, 9, 11, 15, 16, 30, 32, 33, 36, 50, 72, 75

How do we tie in what we're doing already?

Some elements of career education have been around a long time and when you start looking for them

in your school, they'll be there. But once the decision is made to formalize it by calling it your career education program, some of the ideas to be implemented may require teachers to reexamine and perhaps change familiar patterns. It certainly makes sense to evaluate what people in other districts are doing and to retain what's judged effective and consistent with the goals of your career education program.

It's also important to assess resources in the local community. Find out what employers are doing and what unions, community colleges, professional and trade associations already have going that could help you determine the approach to career education that will work best in your district. In addition to aiding staff in the formulation of goals and implementation strategies, these contacts can result in better school-community relations, increased parent involvement and support and, with luck, dollars saved through contributed services and use of available facilities and equipment.

See: Abstract Numbers 1, 12, 15, 32, 33, 35, 36, 72, 73, 75

Do we need to get non-school people involved?

In program development one of the best resources is often least tapped: Non-school people. That's why career educators seek the advice and involvement of community experts--employers, labor people, the self-employed, government representatives, parents and others--when planning their programs.

In Europe, particularly in the area of retraining and updating skills of workers, business, industry and labor determine training needs and then ask the educators to follow through. In the U.S., career education is suggesting an equal partnership.

One way of achieving this can be through the kind of working advisory committee that guided the *Experience-Based Career Education* model and such projects as the *Washington State Career Education* community support effort. These active committees made up of non-educators as well as school representatives are recommended by successful career education programs.

See: Abstract Numbers 11, 15, 23, 33, 62, 66, 72, 73, 74

XI. HOW SHOULD WE ORGANIZE OUR PROGRAM?

The important thing is starting out with adequate planning--assessing the resources at hand and laying out goals--and then figuring out how to make the best use of what's available.

What options can we offer students?

Few career educators would say there is only one acceptable way to develop career education in a school or district. But programs should reflect the needs of students, the resources available and the unique character of each setting. Given those differences, there are a number of options to choose from.

Career educators talk about two basic models (with many variations). The first of these, the *Comprehensive Career Education Model*, involves infusing career education activities and experiences into the regular curriculum and offering youngsters a continuum of career-related experiences K-12. While this program calls for bringing non-educators into the classroom as a learning resource and for experiences for students outside the school via field trips, the major emphasis is on modifying the curriculum in all subject areas and grade levels to include career awareness, exploration and preparation activities.

The other basic model is *Experience-Based Career Education*. Usually developed for 9th to 12th graders, it emphasizes learning outside the school walls. Through community exploration activities and in-depth involvement, students develop their own learning objectives, further clarify career interests and observe how the adult world works.

Both approaches are as useful with the gifted and talented as with the potential dropout. Since

career development requires greater self-understanding, skill in decision making and exposure to differing life- and workstyles, any good career education program must have objectives that are broader than helping people find jobs.

See: Abstract Numbers 33, 66

How does "infusion" happen?

If infusion means "to put in, fill, imbue, install, steep or soak..." then the *Comprehensive Career Education Model (CCEM)* is a plan for applying that definition to career education. It shows how to modify present curriculum K-12 so that youngsters will experience integrated career-related activities each year they're in school. Teachers are to blend career education objectives into regular instruction so students can see how the things learned in school fit the real world outside school. Out of this model have come instructional guides aimed at helping children know more about themselves, their career options and their roles in a work-oriented society. Such employability-related skills as self-initiative and resourcefulness are also outcomes for students.

In six school districts which helped build and test the model, much was learned about the mechanics and politics of infusion. For example, elementary schools seemed to take the lead, while secondary subject-area teachers continued to put highest priority on content mastery--seldom pointing out how academic skills are used in career situations. Where teachers tried it, however, they felt better about career education when they had a hand in developing their own adaptations.

ABT Associates' studies suggest how teachers can incorporate career education concepts into subjects like math, social studies, English, science,

health and the arts. Activities tie an occupational focus with "English relevance," for example. Readings and resource materials are identified but are not intended to be rigid, inflexible plans that sometimes "turn off" creative teachers.

NIE-sponsored case studies report infusion as the method teachers use with 8,000 students in the Russelville, Arkansas area. Self-awareness leads to career awareness as youngsters work their way up to the high school level values clarification which is part of all English courses. Lifestyle issues are considered and students are urged to explore careers which offer the type of home life, wages, responsibility and creativity that appeals to them.

See: Abstract Numbers 6, 11, 36, 46, 66

What about experience-based options?

If observations by some school critics are right, traditional schools which lock-step young people into familiar molds are not really helping students face adulthood. What's needed are options adolescents can choose during the secondary years and beyond. Of particular concern are the disenfranchised and middleclass youth who are joining the ranks of the alienated as they discover their weaknesses in interactive skills and personal attitudes.

One important element of career education--hands-on experience--is often seen as the answer.

Experience-Based Career Education (EBCE) has much visibility in NIE's career education programming. It's different from traditional cooperative work experience (students are not paid and do not necessarily seek job training) and different from alternative schools (*EBCE* students are held strictly

accountable for meeting time and learning objectives using community resources). The experiment is proving to be a popular way to serve youngsters who want their schoolwork to be reality-based and who are willing to commit themselves responsibly to the task. *EBCE* is being implemented both as a separate-but-equal program housed off campus and as an option operating as part of the regular school curriculum.

A similar option is the *Urban Career Education Center's Career Intern Program.*

See: Abstract Numbers 9, 30, 33, 42, 55

Where should a pilot program be created first?

Advice from researchers and practitioners suggests starting in a school that has strong leadership, clear decision-making patterns and receptive and supportive faculty. Usually such a staff will be receptive to the possibilities in career education and the prerequisite inservice training it requires.

If a cadre of self-made advocates for career education can be built, they may in turn become resource people to staff in other buildings. In any case, using top local talent to lead the way in creative curriculum development is best in the long run.

See: Abstract Numbers 6, 7, 15

What about placement and followup in career education?

Placement and followup are necessary parts of career education and help bridge the gap between work and formal schooling. Both services provide feedback for career educators on program effectiveness, enabling them to determine what

works and what doesn't, what should be strengthened and what shouldn't.

Practical ideas include:

- Identify why a trainee was not hired and share that information with the student as a means of learning and improving one's interview skills.

- Track job openings and develop good lines of communication between programs and potential employers.

- Provide followup by telephone and on-the-job site visits six months and a year after program completion to find out how well trainees are succeeding.

- Develop a good information network so that news of recent job vacancies gets out to qualified applicants.

See: Abstract Numbers 9, 11, 61, 63

XII. WHAT KINDS OF MANAGEMENT ISSUES CAN WE EXPECT?

One thing you can count on is that the journey between a new idea and its successful implementation won't be smooth. But you can avoid some of the pitfalls by looking at what other states and districts have done and laying your plans accordingly.

What about personnel, facilities, materials?

Personnel. Adopting a career education program doesn't automatically mean hiring new people. It does demand strongly supportive administrators and creative, flexible teachers. Some programs got off to a stronger start when they hired or designated coordinators or facilitators for career education, assuring an integrated approach to planning and follow-through.

Inservice training for all staff should be a top priority. While counselors and others skilled in guidance are essential actors in the career education scenario, they need as much assistance as other staff in learning how to broaden the guidance effort and aid staff in effectively teaching career decision making. And no doubt about it, such preparation and training requires a budget.

Community people are also a source of volunteer help and bring perspectives on the world of work which lend a sense of vitality and reality to the subject matter at hand. These non-school people will help students understand that there are many conceptions of adulthood, life-and workstyles and that self-awareness is important in career selection. It's vital, though, that community volunteers represent a wide (non-stereotypic)

perspective on careers. Avoid selecting only white male community resource people. Again, little money is needed to use non-school resource people. But, it does demand good staff training and coordination.

Facilities. Be resourceful. All over the country there are effective career education programs operating out of facilities as diverse as the projects which inspired them--from abandoned storefronts, to simulated loan offices housed in mobile units, to regular classrooms where subject matter is made relevant to the world of work. Keep in mind that the goals and characteristics of your program should help determine the physical setting for it and that career education programs don't require new buildings or facilities.

Materials. There's much available and more in the works. Knowing when to spend limited cash and when to develop your own materials requires thought, however. Questions like what is sex and race fair, and how life- and workstyles are portrayed must be considered. Another factor in materials selection is how teachers feel about the proposed curriculum--whether it locks them into narrowly-defined plans or is open to change. If the product is expensive and complicated, successful implementation may be difficult.

See: Abstract Numbers 1, 2, 6, 7, 9, 11, 12, 13, 15, 16, 18, 21, 28, 30, 32, 33, 35, 39, 42, 45, 51, 55, 61, 63, 65, 66, 68, 72, 82

What about political considerations?

First, admit they will occur. Second, be prepared to deal with them. Getting as many people involved as possible and keeping them informed is the most politic thing to do. For career education planners, this advice is passed on by people who know from experience:

activities, for instance, children, adolescents and adults can become more skilled in career decision making. Two large-scale, school-based programs offer resources in this regard--the *Career Planning Support System,* which helps staff place career development into the broad context of school-wide guidance services, and the *Career Decision-Making Program,* a guidance-oriented approach to helping students zero in on their personal interests and abilities and relating these to the world of work. These products--and others under development, such as *Simulated Occupational Choice*--focus on teaching students to recognize what information they need, how to get it and how to use it.

Another major research effort in career decision making emphasizes the importance of positive and negative reinforcement on an individual's occupational and educational preferences. The study stresses the significance of positive feedback from working adults, parents, peers, educators and access to valued role models. Classroom staff and community people need to be aware of the potential import of their feedback on students' career attitudes.

Similarly, many career educators are convinced that real help in making good career choices involves introducing a dose of reality by putting individuals face-to-face with the workaday world.

Career decision making also needs to be looked at in terms of who is making the decision. Chances are if you're a woman, a minority group member or a blue-collar worker, the choices you make can be limited by such factors as stereotypic socialization or a lack of role models which could help set your sights on more prestigious educational and occupational fields. Concerted efforts at countering these limitations are an essential part of any fully successful career education program for all social groups.

- Identify the influential opinion leaders and use them effectively.
- Watch out for lip service.
- Use all the public relations tools at your command.
- Remember, the more outside agencies (state, intermediate and local) you must deal with, the less the likelihood of success.
- Let staff decide they want to adopt career education and it will be more likely to catch on.
- Make sure everybody knows who is responsible for what.
- Remember that most people are short on time--or think they are--and may judge career education on what they personally must do to make it happen.
- Go out and work with teachers face to face; never isolate yourself in your office and simply issue memos.

See: Abstract Numbers 7, 11, 15, 32, 79

What about legal and regulatory considerations?

While various rules and regulations do affect career education, always be sure legalities are being interpreted accurately. How many times has the "it's against the law" refrain been heard when the real reason for not doing something is entirely different?

Take *Experience-Based Career Education,* for instance. A typical reaction is, "child labor laws won't allow hands-on participation," when the

fact is dozens of communities are offering this learning option to young people right now. Do find out if your area has some guidelines to follow. The same is true when teachers and students embark on field trips or invite workers into classrooms.

At the college level, the impetus toward external degree programs is causing lawmakers and accrediting agencies to re-examine time-honored assumptions and practices. Look back in history at the progress that's been made: Adults are now getting credit for experiential learning because someone worked to change the rules so veterans could receive advanced placement for service to their country.

See: Abstract Numbers 38, 47, 48, 52, 71, 72

What about evaluation?

Even though many of career education's outcomes are indeed hard to get a hold on, it's important that we continually improve programs as they operate and be accountable to students and taxpayers alike. That requires evaluation.

While career education planners need to know a lot of information about programs, it's clear there are differences in what kinds of data are needed--when, for whom and how they should be gathered, assessed and displayed. And sometimes it is terribly difficult to measure with our instruments what we believe our eyes tell us.

After considering such issues, Fullan concluded that program decision makers do indeed need certain information as an educational innovation is installed. But he believes that the data collection process should not intrude on or overburden students and staff. For that reason he argues for measuring how much of the innovation

is adopted rather than whether all the outcomes set out in the program proposal have been reached. He also warns against generalizing data from one place to another.

On the other hand, educational research and development practice calls for rigorous evaluation using carefully controlled field tests and certain less formal techniques so that information obtained is as relevant and useful as possible. But even the most avid researcher is likely to agree that decisions should never be based on evaluation data alone. As Brickell points out, sometimes the instruments are wrong while our eyes are right, and we must keep working so that the evidence of the eyes converges with that of the instruments.

There is also danger in making program decisions based on only one aspect of a program. Cost effectiveness, for example, constitutes just one good tool to use in judging the worth and viability of career education programs. A good decision needs more behind it--an examination of the instructional process, for example.

See: Abstract Numbers 6, 14, 15, 32, 34, 36, 53

XIII. DOES SIZE OF SCHOOL DISTRICT OR CITY MAKE A DIFFERENCE?

There are successful career education programs all over the country--in farming areas, in suburbia, in metropolitan areas and in small towns. The size of a district may influence how the idea is put into operation, but size alone doesn't dictate success or failure.

Does career education work in small towns?

Despite some myths about lack of resources, little communities are making career education go. Included in NIE's file of career education success stories is the small mountain town of Evergreen, Colorado where parents, teachers, school board and community members have joined forces in the design and implementation of an alternative school which emphasizes career education for all K-9 students. Over 200 people are designated as community teachers and about 65 students each year are placed with them to learn the skills of a particular profession and its relation to the working world.

There's a manufacturing firm operated by eighth grade students in Norcross, Georgia that is part of the school career education program. It helps participating youngsters develop an understanding of the manufacturing and distribution industries. Lack of money isn't a barrier--Norcross has no budget for its program. Lack of facilities isn't an excuse for not having a career education program, either--Norcross uses existing facilities, as do many other programs.

Evergreen has a small budget and supplements that by enlisting the cooperation and talent of most of the town's business and professional people.

Medium-sized communities like Kennewick, Washington; Charleston, West Virginia; Tigard, Oregon; Hillsboro, Oregon and Billings, Montana are proving that *Experience-Based Career Education* is more than just a nice sounding way to get the school and community together occasionally.

The key to success is using resources, however limited, to the best possible advantage. To do this, it's imperative to set goals appropriate to your community, to get everybody who has a potential role to play involved at the start, and to look at your entire town through new eyes--as a resource for the teaching and learning process.

See: Abstract Numbers 7, 11, 12, 15, 32, 33, 35, 72, 75

Does career education work in big cities?

Career education is popular in big cities, too, if NIE's examples are an indication. From Honolulu to Fort Lauderdale, from Anchorage to Philadelphia, the concept is being adapted to help meet the needs of urban students.

The Honolulu-based program combines field trips, speakers, hands-on experiences, learning centers and computer-assisted career guidance activities to help students K-12 develop good social relationships, civic responsibility, economic efficiency and move toward self-realization. Career education concepts are a part of all academic subject matter.

A Career Education Steering Committee guides voluntary implementation of career education in Fort Lauderdale area schools. Each school adapts existing materials, with the help of subject area resource guides, for the needs of its location and students.

In one of Alaska's few major urban areas, 16 Anchorage schools are pilot testing career education as a part of the regular curriculum. Program staff persons identify and coordinate resources and resource people who assist with the six learning units that involve students K-12.

The Urban City Education Center (UCEC) is an inner city Philadelphia neighborhood. It offers 200-plus dropouts and potential dropouts a different route to a high school diploma by combining career investigation, counseling and basic academic skills with lots of individual attention, support and community and parent involvement.

Two of the four original *Experience-Based Career Education* pilot projects (Oakland and Philadelphia) opened doors to help students test out career choices using resources as diverse as TV stations, stock brokerage firms and biomedical research labs. The six original sites for development of the *Comprehensive Career Education Model* were major cities too--or close enough to one to qualify: Los Angeles, California; Mesa, Arizona; Hackensack, New Jersey; Atlanta, Georgia; Jefferson County, Colorado and Pontiac, Michigan.

Big cities? Sure. With special features and without them. Out in the community or right in the classroom. Low budget, no budget, or enough to get by with--there are lots of routes to a viable career education program, especially in the city.

See: Abstract Numbers 6, 9, 11, 12, 15, 33, 35, 66, 79

Does career education work in rural areas?

NIE's project to identify noteworthy efforts discovered the *Career Education Center* in Audubon, Minnesota, which offers an individualized program

through which retarded and handicapped students gain job-entry skills plus survival skills, which prepare them for independent living.

In rural Louisiana, a comprehensive career education effort works to improve student self-concepts while expanding knowledge about careers and career opportunities. A mobile career education van travels to all parish schools. Staffed by a guidance counselor, it houses an audiovisual exploratory program. There's also an inservice training component for teachers, and an opportunity for uncertified counselors to obtain certification through state-sponsored inservice courses.

Half of the students in the Beckley, West Virginia district participate in hands-on career education experiences. At first this rural coal mining area's project was federally funded; after two years and strong community resources and support, the program is now locally financed.

In isolated northern Vermont, 900 students are benefiting from their school district's efforts to compensate for isolation. Youngsters have the opportunity to develop self-awareness, career awareness and decision-making skills through an integrated career education academic program. And for students in remote Kodiak, Alaska and Colville, Washington, their small towns become the classroom thanks to the *Experience-Based Career Education* procedures, materials and staff training their schools adopted.

While not every rural area will have a deactivated Air Force base at its disposal, the *Mountain-Plains* program in northeast Montana represents a version of career education at its most comprehensive level. Entire families move to this isolated site where toddlers as well as adults prepare for a new lifestyle, with heads of households concentrating on job-specific skills.

See: Abstract Numbers 11, 14, 33, 34, 53, 63

XIV. HOW DO WE GET STAFF READY?

Professional staff want to know why they should implement career education, how they should prepare themselves and where they can go for assistance.

What new professional roles does career education require?

Career education programs require that students be assisted in new and different ways. The type and scope of career education program introduced will determine what professional roles are needed.

In school-based career education programs where infusion is the byword, inservice training of teachers must be a high priority since preservice preparation in career education techniques is only beginning to occur. Teachers need to understand career education's purposes in their school and how its objectives can be realized through day-by-day instruction. They must sharpen their counseling and guidance skills and become familiar with sources of occupational information on jobs that require skills in their subject area. They must become aware of the potential of community resources to extend "textbook" instruction. They need to practice their skills in curriculum development and, like all persons who practice career education, they need to recognize stereotypic views to avoid inadvertently reinforcing them.

For staff in unique experiments like *Experience-Based Career Education*, the *Career Intern Program*, the *Mountain-Plains* program, and the *Home/Community-Based Program*, roles are often entirely different than before. In these projects, staff become managers or facilitators or "brokers" who help learners move as far as they can, as fast as they can. Each of these programs offers documentation

and training information for staff. And in some model programs, employers become teachers and mentors--unique roles that also require special orientation and ongoing assistance.

There are new roles for counselors and administrators, too. Counselors need to sharpen skills in making career guidance sex fair--an area receiving considerable NIE support. Administrators of career education need to understand their coordination responsibilities using materials like those developed through the *Comprehensive Career Education Model (CCEM)*.

See: Abstract Numbers 9, 13, 39, 45, 55, 63, 66, 75

What will staff want to know?

Their questions will usually include:

- What do you want me to do?
- How will it help my kids?
- Are the materials well designed and flexible?
- How does my boss feel about it?
- What are other teachers doing about this?
- Does this fit under our present negotiated agreement?
- Who will I see for ideas and help?
- Will it cost any money?
- Are any rules or regulations going to get in the way?

Potential teachers need competency in certain skills like applying what they teach to the "real world," understanding the complexities of career development and using community resources. These guidelines are already apparent in major programs like the *Comprehensive Career Education Model* and *Experience-Based Career Education* where training materials both for individuals and groups are available.

For institutions of higher education, NIE's *Performance-Based Vocational Teacher Education Project* is an example of a preservice model that identified over 380 separate teaching skills in vocational education and then reduced them into 100 self-contained modules and candidates must prove they can master them.

See: Abstract Numbers 1, 6, 7, 8, 11, 12, 32, 33, 54, 56, 57, 66, 71, 72

XV. WHAT ABOUT USING COMMUNITY RESOURCES FOR INSTRUCTIONAL PURPOSES?

Not everything worth knowing is between the covers of a textbook. That's why career educators are saying "Use the community"--some of the best instructors and learning experiences are to be found outside classroom walls.

Has anybody done it systematically?

Various approaches to the identification, recruitment, analysis and cataloguing of community resources have been used by schools for years as they sporadically arranged field trips, classroom visitors or Career Days. But now career education is asking a lot more from these contacts: What information can students discover about themselves and careers during these experiences?

Approaches to assessing and using the community as part of school-based career education efforts are detailed in the *Comprehensive Career Education Model* and *Washington State Community Support Mechanism Project*. These guidelines suggest the kinds of planning and paperwork required when bringing resources into the schools. The Washington system recommends an active advisory board; establishment of a comprehensive resource network including persons, materials, field trips; system management procedures; and training ideas for staff and volunteers alike.

If you believe adults and sites in the community offer a true alternative to classroom instruction, then examine the *Experience-Based Career Education (EBCE)* model. Each of the four versions offers procedures for recruiting, orienting and evaluating community resources. *EBCE* uses community resources to their fullest extent, primarily by sending students to actual sites for exposure to "academic"

skill building in reading, math and science, that these resources offer.

See: Abstract Numbers 66, 72, 83

Will community people respond?

Too often they've never really been asked. While in Europe business, industry and labor people have been taking much of the initiative for accomplishing career education, the same pattern is taking shape in America. Linkages between education and work are already underway in many states. By and large, the attitude of non-educators toward career education has been strongly supportive. Their willingness to take the biggest step of all and actually work hand in glove with teachers and students to meet learning objectives (with no monetary return) is illustrated by groundbreaking efforts in Washington state and more specifically in the ever-growing number of communities adopting *Experience-Based Career Education*. What community people are tired of, however, is lip service. If their advice and involvement is sought, be prepared to follow it up.

See: Abstract Numbers 32, 48, 71, 72, 74, 75, 79, 83

What are the benefits of using community resources?

Judging from evaluation data gathered from students, parents, staff and cooperating employers, the four original *Experience-Based Career Education* programs have accomplished what they set out to do: Provide an option for any student willing to be responsible for his or her own learning using unfamiliar people and non-traditional places in their community as educational resources. Results show that students keep pace with their peers in regular school

programs while at the same time acquiring valuable personal skills for adulthood.

There are other benefits from school use of community resources that are more difficult to trace--better citizen understanding of what schools are working to accomplish, better support at the polls, better response by parents at school functions, and better attendance and attitudes on the part of students.

See: Abstract Numbers 3, 18, 33

XVI. WHAT ABOUT COMMERCIAL INSTRUCTIONAL MATERIALS?

Hundreds of career education products go on the market each year but most school districts have limited funds to spend. The choice of materials often influences the success of career education efforts. Some districts opt for the prepackaged variety while others develop their own. Either way, decisions must be made carefully.

What help is available in selecting career education materials?

Local, regional and state career education coordinators are good resource people. They may confirm and offer more detail on some of these NIE findings:

- Career education materials should be inexpensive, easy to use and geared to what is already happening in American classrooms.

- Teachers usually want lesson plans and units that are short, simple to prepare, visually appealing, easy to give students for independent study and which allow flexibility in classroom adaptation.

- Administrators are concerned about how much teacher training will be required if career education is to be easily infused into existing curriculum.

A two-volume handbook by the Educational Products Information Exchange Institute analyzes over 700 commercial and noncommercial products--textbooks, films, slides, tapes, teachers' guides and workbooks suitable for all ages. The first volume lays out a step-by-step method to guide planners

and help them pinpoint where they and their schools stand on career education. Questions such as "Which elements of career education are stressed?" and "Has the publisher specified learning objectives?" can help assure the selection of the right products for local programs.

Hundreds of classroom products have been developed as a result of career education research and development. As these have been tested, their producers have learned a lot about the kinds of materials that work best. One rule is common: Specify your program goals and philosophy before selecting any materials.

Another mechanism for seeing and hearing first hand what materials career education research and development have produced is the NIE-sponsored series of *National Career Education Forums*. Now anticipating its third year, the *Forum* offers a chance for career educators to see what products are in use across the country.

See: Abstract Numbers 1, 15, 18, 36, 54

What curriculum materials can we obtain?

The types are varied. A few are:

- Comprehensive career education materials for regular school classrooms (*See: Abstract Numbers 36, 46, 66)*
- Community-resource oriented materials that relate school work to real work (*See: Abstract Numbers 9, 14, 33, 72)*
- Exploration materials to help students discover career possibilities (*See: Abstract Numbers 4, 33, 56, 66, 69)*

- Materials to help expand student awareness of what they can become (*See: Abstract Numbers 39, 45, 65)*

- Catalogs of other career education materials with selection criteria (*See: Abstract Number 8)*

- Objective-based occupational training materials (*See: Abstract Number 63)*

How can we combat sexism and racism in instructional materials?

Educators must accept a key role in correcting inequality. Part of being able to combat something is first being aware that it exists, so close scrutiny of all materials used in the classroom should be the norm. If books, films or other materials show women and minority group members in stereotypic jobs or roles, it is strongly recommended that you do not use them. If for some reason you must use something stereotypic, counter it with other materials (and discussions) that aren't. The Educational Products Information Exchange Institute's handbooks detail additional strategies for detecting and counteracting sexism and racism in classroom materials.

Many of NIE's researchers agree that the predominate themes for all students should be "You can be anything you want to be," and "Pick any career that matches your interests, talents and values." Others suggest showing materials and having discussions about positive alternative role models, workstyles and lifestyles.

But materials alone won't solve the problem--planners, teachers, counselors, administrators and all persons who work with young people are urged to examine their own attitudes and become

conscious of how they are affecting children.

See: Abstract Numbers 8, 13, 18, 28, 31, 68

XVII. NATIONAL INSTITUTE OF EDUCATION CONTRACTS AND GRANTS ABSTRACTS

1. THE ABANDONMENT RATES AND CAUSES OF ABANDONMENT OF INNOVATIONS IN SECONDARY SCHOOLS

Which recent innovations are more durable? This examination of the success rate of 33 current educational practices in 3,200-plus Midwestern schools suggests some answers for innovation-weary educators.

The winner for durability was simulation and gaming activities, which were adopted by over 2,100 of the responding schools and abandoned by only 18.

Career education also scores high on adoption and low on abandonment. About 52 percent of the schools surveyed had implemented career education practices. Of these, less than one percent had abandoned the practices. Schools which dropped career education cited staff personnel problems such as lack of leadership and inadequate teacher training as the main reasons.

What is it that determines which innovations make it and which ones fail? Those that are complex, expensive and difficult to administer fail. If principals or superintendents don't have to spend a lot of time and energy, chances of success are better. A real indicator of whether an innovative practice will hold is the degree to which it can be developed and implemented by individual teachers without affecting other ongoing programs of the school or existing organizational framework. Well-packaged, easy-to-use materials are a big help. There is a critical period in the existence of an innovation, too. If the practice is in use beyond three years, the chances of it being retained are measurably improved.

Other observations are that some school districts will wait to see if neighboring districts experience success before trying an idea. Preferences in new methods are those which help

all students. Many administrators don't know how to introduce or support change and could benefit from leadership training. Fortunately, patrons usually favor most innovations.

DeArman issues a caution to school decision makers: "New practices require adequate personnel and financing to implement and these conditions should be carefully considered when attempting adoption." With fewer dollars available for new programs these days, DeArman's findings will ring true to those who read the full report.

Principal Investigator: John DeArman
Department of Educational Administration
University of Missouri
Columbia, MO 65201

PRODUCTS AVAILABLE: Investigation of the Abandonment Rate and Causes of Abandonment of Innovative Practices in Secondary Schools. Contact the author for availability.

Contract No.: NIE-G-74-0005 Funding: $9,893

2. AN ANALYSIS OF GUIDANCE, COUNSELING AND PLACEMENT IN CAREER EDUCATION

Are current career guidance programs effective? This survey of student and adult attitudes points out some gaps in current programs and strong sentiments for change.

Students indicated a definite need for additional assistance with career decisions and unanimously concurred that knowledge about interests, abilities, needs and values should be first priority in any career guidance effort. They also reported that although they were receiving some assistance in this area, they wanted (1) more relevant and accurate information on specific educational and vocational opportunities, (2) additional real-life job experiences and (3) preparation for finding the first job.

In suggesting expenditures to improve career guidance, students assigned highest priority to increasing one-to-one assistance from counselors, better teacher/counselor preparation for career guidance, more and better information sources and additional programs with direct worker contact.

Teachers, counselors, education leaders and employers provide other views on career guidance needs. All believed there was a critical need for career assistance for youth and adults. They thought present career guidance materials in career awareness, decision making and 12 other areas were inadequate, with the exceptions of occupational information and occupational classification systems.

Recommendations for improving the quality of career guidance were extensive and included improved inservice training, major changes in teacher and counselor training programs, and development of practical materials and techniques.

The majority of professionals showed little interest in research projects and model development. Instead they stressed integrating materials in a meaningful way, training professionals to use them, and taking programs off the drawing board and putting them into action.

Principal Investigator: Joann Harris Bowlsbey
Project Discover
Western Maryland College
Westminster, MD 21157

PRODUCT AVAILABLE: Career Guidance Needs of the Nation's Youth and Adults. Available from ERIC.

Contract No.: NIE-C-74-0121 Funding: $10,000

3. ASSISTANCE IN THE REVIEW OF EBCE PROJECTS' SITE ANALYSIS PROCEDURES

Using a factory or an air quality laboratory as a classroom was just a concept in 1971. Today employer site analysis procedures have been developed that allow educators to identify community sites that can provide valuable learning, develop profiles of these work sites as "classrooms" and design learning activities that can happen there.

A study of these methods, developed by Experience-Based Career Education (EBCE) programs in four widely differing communities, reveals they are extremely useful--but costly--techniques. However, by gleaning the best ideas from the four projects and combining the information they have gathered, costs for new EBCE projects implementing the strategy could be greatly reduced.

The suggestions:

- Develop a single, general manual outlining the steps of site analysis and the types of information to gather at each step.
- Develop a single, short checklist to speed up the site analysis process.
- Let students and employers take over some of the work of designing student projects at employer sites.
- Develop a single information bank to capitalize on the site analysis findings of the four EBCE projects.

EBCE students use employer sites to learn a number of skills--job skills, certainly, but the "three R's" and important life skills as well. The site analysis procedure builds a bridge between students' goals for increased academic, personal and career

growth and the curriculum content which is available in the community for the asking.

Principal Investigator: Charles Foltz
Weston Associates
7 Columbine Road
Weston, MD 02193

PRODUCT AVAILABLE: Community Resources for Experience-Based Career Education Program: An Analysis.

Contract No.: NIE-C-74-0104 Funding: $10,500

4. CAREER DECISION-MAKING PROGRAM

Sorting out the information that goes into making career choices can be a confusing process for young people and adults. To make that process a little easier the Career Decision-Making Program (CD-M) is showing staff and students how they can relate personal characteristics and school subjects to the wider world of work.

"I am not absolutely certain I want to become a buyer but at least I learned to ask the proper questions about myself and an occupation I'd like to enter," said one student at a CD-M field test site. "For the first time in my schooling to date," said another, "I was learning something about what I wanted to be."

For students the key to the program is a Career Information System based on the widely-used Dictionary of Occupational Titles. And for school staff trying to build a comprehensive career education program, CD-M has developed 15 career guidance units for the secondary level that will help all students explore career options and practice decision-making skills. Students are taught the process of gathering, evaluating and using information about themselves and the world of work--how to respond to new information as they and their environment change.

The 15 sequential Career Guidance Units focus on student activities designed to meet program objectives in a group guidance setting. The first four units address the central program concepts of career, self-exploration, occupational exploration and decision making. These units introduce basic exploration and decision-making skills within the framework of career.

Units five through ten use the Career Information System to provide experiences in exploration of

occupational groups, the DOT Worker Trait Groups (WTGs), and occupations in terms of personal characteristics. In units 11 through 13 students examine major social, environmental and economic influences on career. The final two units help students utilize exploration and decision-making skills in developing or clarifying career plans, including tentative occupational choices.

The Career Guidance Units consist of a counselor/teacher utilization guide, filmstrips and student materials. The staff guide contains detailed lesson plans for each unit. Filmstrips are used as one means of introducing the basic concepts of the units. Student materials--featuring worksheets, test materials, simulation and gaming activities--are designed to accommodate students at varying levels of experience and concept development, using a variety of classroom activities.

The units can be used on a year-long, semester or six-to eight-week basis depending on purposes and additional activities such as field trips.

CIS can also be used with other career education programs. It accommodates a wide range of resources--occupational briefs, bound occupational information, audiovisual materials, VIEW, field trips, classroom experiences, speakers, employer site experiences, simulation, games and so on.

The Worker Trait Group Arrangement of the DOT is used as the basic structure of the CIS. All career information resources that can be linked with occupations or with Worker Trait Groups can be processed into the system. This is accomplished by classifying occupational titles according to their appropriate WTGs and filing and indexing the sources.

The DOT contains three of the most comprehensive occupational classification systems and is one

of the most common sources of occupational information. However, it has had limited use in secondary schools because of two major problems: The language has been difficult for young readers and the format has seemed complicated. Therefore, in order for the WTGs and other DOT materials to be used successfully, CD-M staff rewrote the information at the eighth grade reading level using a simpler format.

The system can be entered from various starting points. Students can find career information based on their interests and other personal characteristics, thus providing tailor-made career exploration. The system also provides a means for group orientation and exploration activities which can be conducted through school subjects or as part of a group guidance program.

CIS materials consist of basic guides, indices and supplementary access materials designed to make the DOT and other governmental and commercial information publications more useful for career exploration. A unique feature of CIS is its open-endedness--it provides a capability for linkage with other systems by indexing the clusters in the existing systems to appropriate WTGs.

Field testing of the CD-M program--which has been under development since 1971--included preliminary testing of the CIS at the college level where it was determined the materials could be used for career exploration and decision making. During 1976-77 CD-M program development will continue at the college level.

Principal Investigator: David Winefordner
Appalachia Educational Laboratory
P.O. Box 1348
Charleston, WV 25325

PRODUCTS AVAILABLE: Contact McKnight Publishing Company, Box 2854, Bloomington, Illinois 61701.

Contract No.: NE-C-00-3-0093 Funding: $1,728,887

5. CAREER EDUCATION CONCEPT RELATIONSHIPS STUDY

While career education was emerging as a priority for American schools in the early 1970's, few people knew where the idea would lead or what the federal role should be.

Bringing many views to bear on the problem, several concept studies covering a variety of topics and perspectives on career education issues served as guides for planners and researchers.

Essays on Career Education. There is no pat definition here, but rather a framework for understanding career education that became a basic document in the emerging literature on "the movement." This comprehensive look at what career education is and can be contains 24 papers by students, teachers, administrators, and leaders of business, industry, labor and government. The critiques were commissioned by former Commissioner of Education Sidney P. Marland, under whose leadership career education became a familiar phrase. (GPO #1780-01147)

Career Education Survival Manual. Based on a state-of-the-art study in 1972-73, this book covers issues and possible answers for persons interested in the why's and how's of career education. Many unfolding definitions of the concept are offered, and its problems, pitfalls and parameters are identified--all guiding the reader toward building a local response to career education. Available from Olympus Publishing Company.

Counseling and Guidance: A Survey of Current Practices and Analysis of Implications for Career Education Guidance and Counseling Programs. Based on extensive interviews with counselors and others concerned with counseling and career education, this work recommends that counselors:

- demonstrate and maintain certain competencies;
- be chosen for their ability to relate well with people;
- be future-oriented;
- be prepared to work with special groups such as minorities, women and the handicapped;
- avoid taking on administrative chores that cut into guidance time;
- specify objectives for themselves;
- learn to work with community agencies.

As for labor market information, how schools use such data and its apparent reliability are both inadequate. Local projects are seldom available and counselors often don't pull together what's at hand.

Process Analysis and Documentation for Utilization of Research Findings. While government spends ten times as much money on research as it spends on getting the results into the hands of practitioners, industry's scales are tipped the other way--more on marketing and less in research. While not making judgments about either practice, this study calls for researchers and developers to document and market their work so that people who will carry out new programs can follow step-by-step procedures and avoid the hidden pitfalls.

Basic Skills Study. Not much is known about the relationship of literacy--primarily reading ability--and success in getting and holding a job, concludes this study. An increase in literacy is not necessarily a passport to a better occupation. Also, remedial programs designed to bring persons up to par may be expensive and may

not be all that reliable. Factors like dialect may influence an employer more than the applicant's ability to read and compute. And as far as delivery goes, teachers still have greater impact on students when it comes to helping learners improve their basic skills than aids like teaching machines and packaged materials.

Principal Investigator: Rex Hagans
Northwest Regional
Educational Laboratory
710 S.W. Second Avenue
Portland, OR 97204

PRODUCTS AVAILABLE: See above. Contact the principal investigator for further information.

Contract No.: OEC-4-7-062871-3059 Funding: $215,700

6. CAREER EDUCATION CURRICULUM IMPLEMENTATION IN SIX SCHOOL DISTRICTS

After big doses of Federal money are gone, what happens in local districts where the original ideas took hold? For the six school districts involved in developing the Comprehensive Career Education Model (CCEM) the blessings were mixed--yet everybody learned something. Among the highlights noted so far are:

- Creative curriculum development in career education is slow, expensive and demands top local talent.
- Career education leaders cannot isolate themselves in offices or behind memos; they must meet teachers face-to-face.
- Secondary schools still lag behind the elementary grades in the delivery of career education--particularly "academic" teachers whose priority on content mastery means they seldom point out how their subject matter is used in career situations.
- Teachers will feel better about career education if they have a hand in creating their own adaptations.
- Hands-on experience for all students in community work places remain an unfulfilled objective.
- If local taxpayers back them to the wall, school officials are not yet ready to guarantee whether career education outcomes are being reached.
- The six school districts needed more time (but probably the same amount of money) to implement CCEM more effectively.

This study--still in progress--builds from previous evaluation work conducted during the design and development phase of CCEM. A prime subcontractor for this study on implementation is Policy Studies in Education which was responsible for the earlier evaluation.

Principal Investigator: Carl Rittenhouse
Stanford Research Institute
333 Ravenswood Avenue
Menlo Park, CA 94025

PRODUCTS AVAILABLE: In progress.

Contract No.: NIE-C-74-0105 Funding: $205,657

7. CAREER EDUCATION IMPLEMENTATION: A HANDBOOK FOR STRATEGY DEVELOPMENT

Persons responsible for getting career education started--often called "advocates"--typically encounter a number of barriers. School staff can anticipate problems experienced by other career education innovators and use various techniques to overcome those obstacles.

The handbook assumes a product--such as a curriculum unit or a total program--is on hand and ready for use.

- Establish incremental objectives. Outline what is to be done, under which conditions and how well.

- Profile influential elements. Understand the product to be installed (its good and bad features), who is in the best position to help or hinder (organizational dynamics both in school and community), and how much clout the advocate possesses.

- Select appropriate installation techniques. Depending on the conditions at a particular point in time, career education advocates may choose from among 30 district techniques classified under three broad headings: (1) informative (telling and showing), (2) persuasive (influence and appeals), and (3) coercive (use of power).

- Time the actions. Anticipate likely reactions of decision makers in both school and community; then lay out costs and schedules within those parameters.

- Initiate the actions. Keep communication lines open and maintain a stockpile of common sense, openness and flexibility.

- Assess the impact of actions. Evaluation of implementation process must be continuous, beginning with day one.

- Reformulate the strategy. Based on evaluation data, take a look at initial objectives and strategies and make changes as necessary.

Based on several years of research and development using other Center innovations as data sources, Career Education Implementation: A Handbook for Strategy Development includes three modules: (1) a procedural guide for career education advocates, (2) a workbook that enables advocates to test out their understanding of the process information, and (3) a description of the 30 alternative approaches to implementation, including the advantages and disadvantages of each.

Principal Investigator: Center for Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, OH 43210

PRODUCTS AVAILABLE: In addition to the handbook described above which is still in preparation, three monographs are available: The Adoption of Systems Innovations in Educational Organization: A Case Study of Operation Guidance; Identification of Empirical Dimensions of the Diffusion Process: Interim Report; and Perceived Effectiveness of Innovation Diffusion Tactics. Contact the developer for availability.

Contract No.: NE-C-00-3-0080 Funding: $355,503

8. CAREER EDUCATION INSTRUCTIONAL MATERIALS: A COMPENDIUM OF INFORMATION

With hundreds of career education products flooding the market these days, school people find it tough to decide how to spend limited dollars. The Educational Products Information Exchange Institute's epie career education s*e*t*: Selection and Evaluation Tools is a selector's guide which analyzes more than 700 commercial and noncommercial materials. Textbooks, films, slides, tapes, teachers' guides, workbooks, etc. for use with all age groups are described. A "Products Under Development" section alerts the reader to watch for forthcoming materials.

The first book of the two-volume package, How to Select and Evaluate Instructional Materials, presents a step-by-step method to help teachers and administrators pinpoint where they and their schools stand on career education.

The procedures for selecting appropriate materials deal with such questions as "Has the publisher specified learning objectives?" and "Which elements of career education are stressed?". Such clues to the nature and practicality of the materials will help staff decide how well these fit local programs.

How to recognize sexism and racism in career education materials is another important focus of this product. Blatant examples are easy to spot, but the subtle, more insidious ones are hard to discover and hard to counteract. Taking the position that education and educators must accept a key role in correcting inequality, strategies for detecting and counteracting sexism and racism in the classroom are suggested.

A second book, Analyses of Seven Hundred Prescreened Materials, helps the educator access

more materials in a few hours than a parade of publishers' representatives could present in many weeks. The analyses specify titles, authors, publishers, components, target audience, curriculum role, producers' evaluation activities and instructional design. Elements of career education found in each item are identified: Self-knowledge, decision making, educational development, career awareness, economic awareness and other competencies. The s*e*t* is available from the developer.

Principal Investigator: P. Kenneth Komoski
EPIE (Educational Products Information Exchange)
463 West Street
New York, NW 10014

PRODUCT AVAILABLE: epie career education s*e*t*. Contact the developer for availability.

Contract No.: NIE-C-74-0138 Funding: $108,329

9. CAREER INTERN PROGRAM

Alternative schools fade in and out, but this one is succeeding and growing according to staff and students. The Urban Career Education Center (UCEC), in an inner city Philadelphia neighborhood, offers its interns a different route to a Board of Education-validated high school diploma. Here 200-plus dropouts and potential dropouts from traditional 10th, 11th, or 12th grades are becoming winners in a program which combines career investigation, counseling and basic academic skills with lots of individual attention, support and community and parent involvement. This successful combination is the result of years of hard work by the Opportunities Industrialization Centers of America. OIC/A, USOE and NIE have supported the Philadelphia UCEC program, an outgrowth of OIC/A's experience in serving adult men and women needing skill training to better their employment situations.

Recruitment of interns includes referrals from city high school counselors. Once accepted the interns enter Phase I, a 21-week career awareness program designed to help them see the variety of careers open to them. This phase includes classes in English, math, social studies and science which use non-traditional teaching strategies to pinpoint academically weak areas. Instruction is keyed to the working world, showing interns how each discipline relates to occupations. A low intern/staff ratio assures individual attention, backed up by weekly intern/counselor meetings and career counseling seminars. At the end of Phase I, progress and goals are assessed.

Phase II provides up to four semesters of hands-on, fused academic/career education including two week-long career experiences aimed at testing interns' interests and providing a realistic perspective of demands and rewards of the jobs they explore. In addition to hands-on exposure,

Phase II stresses individualized instruction and independent study. Advanced courses in the disciplines previously mentioned ensue. UCEC keeps in close touch with Philadelphia's businesses, industries and community service agencies in addition to ongoing communication with interns and their parents.

Success in Phase II opens the door to Phase III, when interns concentrate fully on achieving their post UCEC goals, whether college, on-the-job training, skills training or employment. Results of Phase III dictate whether the intern successfully completes regular high school graduation or GED requirements. Interns who choose vocational or on-the-job training are assisted by their counselors for six-months, college-bound interns for a full year after leaving UCEC.

What advice does UCEC give to other interested cities? At halftime in its program development UCEC says: Remember at the outset that the process of change or development takes time. Written program plans should be viewed as tentative ideas to be tried out and changed on the basis of goals and experience. The intent to experiement is not sufficient to guarantee that experimentation will take place. Tradition dies hard. The expectations of the Career Intern Program are different from those of the typical high school. A new program must provide alternative structures (inservice workshops, new curriculum materials, appropriate schedules and so on) which will enable staff to meet those expectations.

The final report is in progress.

Principal Investigator: C. Benjamin Lattimore
Opportunities
Industrialization Centers
of America
100 West Coulter Street
Philadelphia, PA 19144

PRODUCTS AVAILABLE: NIE Papers in Education and Work: No. 7: Vol. I: An Experiment in Career Education that Worked; Vol. II: Technical Appendices. Contact NIE for availability.

Contract No.: NE-C-00-3-0122 Funding: $2,919,563

10. CAREER PLANNING SUPPORT SYSTEM

If the critics are right when they say high school career planning services are often too little, too disorganized and too late, there's help on the way.

A Career Planning Support System (CPSS) has been tested in 50 schools involving 51,000 students. Teachers administrators and citizens in these sites know what their students need, how to help them and how to know if it's working.

Central to this system is involvement by everyone concerned. Committees are organized, needs and resources identified, goals and objectives spelled out and delivery options devised.

Yet the researchers discovered gaps that schools had trouble bridging for themselves. Hence, in addition to manuals on how to adopt the planning model:

- Career guidance methods for girls will emphasize the broad range of career options and career patterns for women available today and in the future.

- New guidance techniques for minority youth (historically neglected by overemphasis on white, middle-class college-bound Americans) will assure that adults who influence minority children are properly informed about educational and occupational opportunities. The idea is to provide influential adult models for those children who have none.

- Instead of handing students a diploma and saying "that's it," specific career guidance aids for <u>all</u> students will include job placement and followup programs, job seeking clinics and work entry courses.

One such instructional unit--called "Coping in the World of Work: Practice in Problem Solving"--puts each student in a role-playing, "in-basket" exercise and sociodrama-type activities to discover their own courses of action by solving simulated problems.

Principal Investigator: Center for Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, OH 43210

PRODUCTS AVAILABLE: Procedural guides due in early 1977. Related publications include: The Product Engineering of a System for Upgrading High School Career Planning Programs (Technical and General Reports, 1975); Career Guidance Materials: Implications for Women's Career Development (1974); Coping in the World of Work: Practice in Problem Solving (1976); Significant Others and Careers (1977); and Sugar and Spice Is Not the Answer: A Parent Handbook on the Career Implications of Sex Stereotyping (1977). Contact the developer for availability.

Contract No.: NE-C-00-3-0079 Funding: $2,350,703

11. CASE STUDIES AND ANNOTATED LISTINGS

What are some of the nation's best examples of career education? Here are two books which can provide profiles of how communities are trying to help people deal with career decisions.

Career Education Catalog supplies an annotated listing in three categories--Comprehensive Public School, Supplemental Public School and Alternative and Community Based--of over 85 local, regional and state career education projects around the country. The brief descriptions include program highlights, rounded-off budget amounts, and the names and addresses of program officials who can answer questions.

Diversity is the best way to describe these products. The Catalog points out creative ways in which local school people present career education concepts in a manner appropriate in the communities they serve.

A companion book, Eleven Career Education Programs, puts the spotlight on the selected, diverse and innovative programs for an in-depth look at each one. While no evaluation was intended, the authors described the programs as they encountered them during the site visits. With the help of each project's staff the problems, solutions and successes were detailed.

Most of the career education efforts chronicled are aimed at elementary or high school youngsters, with two notable exceptions. The Minnesota Metropolitan State College is an alternative college whose students average 33 years of age and who pursue competency-based B.A. degrees on a part-time basis while working, raising children, enjoying retirement or whatever. Advocates for Women of California's Bay Area focuses on putting

women into nontraditional jobs and apprenticeships.

Even though specifics differ, some down-to-earth similarities deserve mention:

- Concerted efforts were made to involve business and community people--as working advisory committees or boards of directors.
- Teachers are the key to successful change and must be involved in planning, design and decision making as well as implementation.
- Students and clients are encouraged to increase their levels of self-awareness as a factor central to making better life and career decisions.
- Staff working in these programs are enthusiastic and committed to making career education succeed, which helps them gain community support and maintain participant interest.

Principal Investigator: Kathryn D. Hewett
Abt Associates, Inc.
55 Wheeler Street
Cambridge, MA 02138

PRODUCTS AVAILABLE: Both books are now available from Abt Associates, Inc.

Contract No.: NIE-C-74-0129 Funding: $78,648

12. CASE STUDIES OF THE PLANNING PROCESS FOR THE IMPLEMENTATION OF CAREER EDUCATION PRODUCTS AND ACTIVITIES

While traditional schools are not going to implement career education overnight, they may well need to prepare for the following scenario.

Time: The future. Place: Anywhere, USA. At age 15 many students will be ending their formal classroom education and beginning to work full-time at learning a career. Their passports to the workplace will be educational vouchers redeemable at employer sites across the country at any time in their lives. Their teachers: Employees who are specially trained to "teach" their jobs. Their classrooms: Workplaces designed to provide opportunities for effective learning.

This forward-looking recommendation was made in a case study in the Los Angeles Unified School District. Profiles of six other districts that helped develop the Comprehensive Career Education Model point out some other issues:

- Implementation should be successful in districts where career education is infused into the general curriculum and supported by opportunities for staff development, time off to plan and other incentives for classroom teachers.

- Career education planning appears to bear fruit when there is neither too much nor too little planning. An approach that begins by ensuring adequate support of administrators and bringing potential participants into the information-sharing and planning process enjoys wide support.

- Unfortunately financial resources are often used up in the planning process. Success

of the program depends on the ups and downs of funding, the attitude of administrators, the willingness of teachers to take on "yet one more task" and factors like district reorganization, which divert attention and energy from planning efforts.

To infuse career education successfully into K-12 programs, then, requires strong administrative support, adequate funding resources and cooperative planning efforts among all staff members to get a good program off the ground.

Principal Investigators: Kathryn Blake
Karen F.A. Fox
Harry F. Silberman
William J. Goodwin
Cas Heilman
Norman Higgins

PRODUCTS AVAILABLE: Available from ERIC.

Contract No.: NIE-C-74-0050, 51, 52, 53, 54, 55

Funding: $36,255

13. CONFERENCE ON FREEING SEX ROLES FOR NEW CAREERS

Women and men are still locked into sex role stereotypes without much freedom to choose new career directions. This was the opening note of an NIE-sponsored conference of 38 students, counselors, administrators and professionals who examined ways to help people break out of traditional work roles and reach their full career potential.

What targets for action did this blue-ribbon group see? Remove stereotypic illustrations from career guidance materials. Prepare young people to choose adaptive strategies rather than staying in rigidly "appropriate" behaviors. Get counselors and educators to rethink the concepts of masculinity and femininity by examining their own values. Teach courses on sex roles that show alternative role models, life styles and work styles. Organize assertiveness training for men and women as individuals or as couples. Make young women more aware of the multiple work and life options open to them. Help young people get to know themselves better--their interests, skills, talents--in short, what's important to them as individuals.

Participants felt that this conference gave them an excellent opportunity to exchange ideas and that it would help reach the goal of expanding career options for men and women as conferees implement their ideas in their own work.

Principal Investigator: Janice M. Birk
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PRODUCT AVAILABLE: Document currently out of print.

Contract No.: NE-C-00-3-0060 Funding: $1,200

14. A COST-EFFECTIVE ANALYSIS OF THE ECONOMIC AND EDUCATIONAL IMPACT OF THE MOUNTAIN-PLAINS EDUCATION AND ECONOMIC DEVELOPMENT PROGRAM, INC.

Estimation of the costs and benefits of training each family member in the Mountain-Plains Program is difficult. And the available data at Mountain-Plains essentially precludes such estimation.

Economist Stromsdorfer and colleagues examine four important questions often asked to assess success in job training efforts: Does the person find a job, at what skill or status level, at what wage or salary figure and what do these benefits cost?

In terms of measuring costs it would have been simpler to look only at the cost of instructor services and the cost of the trainee's time as measured by lost wages. True costs of the Mountain-Plains program are confounded, say the researchers, by developmental costs that fluctuate between starting and stabilization, and by circumstances that would not be present in other communities--e.g., an airbase in a very rural area that is rented for $1 per year--and frequent changes in the program's structure.

Complete data could be obtained on only 12 persons who participated during the start-up period (out of several hundred who passed through Mountain-Plains). The absence of good data on a control group made the estimation of benefits difficult. Due to frequent program changes, it was not possible to measure costs in any reliable way. Thus the final word on the net benefits of Mountain-Plains is still to be written.

One particularly useful appendix criticizes previous efforts at gathering cost-effectiveness data in career education. It notes that cost-benefit ratios should only be one tool for decision

makers to use in judging the worth and viability of such programs.

Principal Investigators: Ernest W. Stromsdorfer
Karman Moayed-Dadkhah
Department of Economics
Indiana University
Bloomington, IN 47404

PRODUCTS AVAILABLE: A Cost-Effectiveness Analysis of the Economic and Educational Impact of the Mountain-Plains Education and Economic Development Program, Inc. Contact the authors for availability.

Contract No.: NIE-C-74-102 Funding: $33,770

15. A CRITICAL SURVEY, REVIEW AND SYNTHESIS OF RESEARCH ON CURRICULUM IMPLEMENTATION

Even though elements of career education have been around a long time, it represents a new approach to doing things in schools. Some of the ideas require teachers to change familiar patterns. Some research has been conducted on how implementation occurs once the decision has been made to adapt an idea at the local level. Most people "pushing" a new program for schools have a product they want installed in toto and overlook the needs, interests, and participation of students, parents and teachers in shaping the innovation to fit local conditions. Here's what the research literature from the U.S.A., Canada and Great Britain says along with policy implications. An excellent bibliography on change processes is indicated. Fullan and Pomfret's review suggests these "do's and don'ts" for career educators:

- Deal with conflict constructively and be prepared to negotiate. Conflict is inevitable and can be healthy.
- Teachers consistently have one set of expectations and administrators/school boards another. Since teachers are the key users in the long run, secure their active participation early.
- Students and parents should be involved in deciding goals and means of implementation.
- Make sure the program is backed up by time, materials and feedback from the very beginning.
- Identify roadblocks early and know how you'll respond in advance.

- Start the program in a school building that has strong leadership, faculty support, clear decision-making patterns and is receptive to inservice training.

- If a number of "outside" actors are involved (county, state, federal agencies, etc.), likelihood of success decreases. Such political complexity makes coordination vital.

- Planning for implementation is a must before operation begins, including time for teachers to plan their own training.

- Planners should be wary of producing materials and other curriculum products and should concentrate more on how others (users) can be involved in such a process before and during initial implementation.

- Everybody should know who's going to be doing what, to whom, how--and why. As staff gain experience in implementation, roles will change naturally. A too-rigid and complex system will alienate staff.

- Avoid being too explicit about the innovation, but plan for increasing explicitness during the process. Don't be surprised if you wind up with an innovation different than the one you started to implement. That's natural. Planned variation can be useful.

- Evaluation, particularly in the beginning, should emphasize information that will help make implementation better rather than judging success or failure. While research is imporant, exhaustive data gathering can overburden students and staff alike. Try using case studies.

- Don't generalize evaluation findings from one implementation site to another.

- It's easier to measure the degree of implementation of a program or idea than it is to measure student outcomes.

Principal Investigators: Michael Fullan
Alan Pomfret
Ontario Institute for
Studies in Education
252 Bloor Street West
Toronto 5, Canada

PRODUCT AVAILABLE: Review of Research on Curriculum Implementation. Available from the authors.

Contract No.: NIE-P-74-0122 Funding: $2,000

16. CURRICULUM BUILDING PAPERS

If teachers today don't see a crying need for change, chances are that they will not be overly receptive to new developments. But at the same time, curriculum developers must be able to gaze into a crystal ball and predict the problems that will face teachers five or six years from now. If developers concentrate only on what the schools need now, they will be in real danger of preparing obsolete materials.

This series of papers on curriculum building indicates that school curriculum develops in a number of ways. For some it evolves logically with a clear statement of goals and careful attention to specified behavioral objectives. For others it is an artistic creation and a blend of "great ideas."

Yet crucial to each approach is attention to goals and purposes--a clear statement of the problem that the program hopes to solve: "Curriculum development is mostly the art of making good judgments and decisions made in the first steps of a project can bless or curse a project throughout its duration."

Teamwork is a prerequisite for any worthwhile development, and staff need to integrate all phases of the development process. For example, if they want a better-than-average product, evaluation should begin with the idea itself and continue throughout the entire development. Controlled field testing is also a must.

As for the role of teachers, most curriculum developers agree that teachers must be involved in the building process. If the teacher does not believe the new design to be worthwhile, chances of its being retained are slim indeed. The best curriculum, says one author, allows teachers

to pick and choose materials that best fit their priorities and purposes.

Another caution: If there is to be any long-term implementation of new curriculum, it must be funded through regular, ongoing budget categories. If curriculum is totally dependent upon federal funds, then when the money goes, so goes the innovation.

Principal Investigator: ARIES Corporation
4930 West 77th Street
Minneapolis, MN 55435

PRODUCTS AVAILABLE: Papers on curriculum building published by NIE in 1974. Contact NIE for availability.

Contract No.: OEC-0-725240 Funding: Cumulative

17. THE DEVELOPMENT OF CAREER AWARENESS IN THE YOUNG CHILD

When boys put on a stethoscope and girls a nurse's cap at age 3, they're acting out stereotypes about careers they can hold in the future. How do they learn these roles so soon? Primarily from parents and TV.

While most educators are more concerned about career decision making in adolescence and adulthood, the fact is that career "imprints" and self-concepts built in childhood have already taken hold.

Research reviewed in this paper says that at age 3, for example, white children are aware of stereotyped racial and female occupational roles and have accepted them. By eight years of age children perceive the subtle messages about prestige assigned to differing occupations. Moreover, the eight-year-old girl has already drastically limited her choice of occupations and has begun to consider careers deemed "appropriate" for women. Young black girls, on the other hand, show the effect of their own racial stereotyping and have developed higher aspirations than young black boys of similar age.

The forces which develop these stereotypes are complex and not yet fully understood. Yet the authors contend that of these forces the major influences are parents and mass media, working in combination with the developing self-concept of the child. The parent role is seen as the most critical, being far more influential than that of peers, counselors and teachers. Parental influence continues throughout adolescence, usually reaffirming that a girl's role is simply more limited than a boy's, socially as well as occupationally.

Television is the other powerful force on the young child. Its potential in demonstrating a wide range of occupational activities and negating racial and sexual stereotyping is enormous, say the authors. Unfortunately, present programming lacks positive female and/or minority role models.

Despite the importance of self-concept and career aspirations, this relationship has been largely ignored in the development of career education programs for young girls and women. Research indicates that the self-concept of girls and women incorporates a higher level of fear of failure and fear of success than that of males. These strong emotional barriers work to limit aspirations and influence females to choose less prestigious and less demanding careers.

What's needed to improve career awareness in young children? The authors favored materials that gradually reinforce positive attitudes about the work world, particularly the idea "you can be anything you want to be." They found that few materials meet these requirements. Most fail to suggest activities for 3-8 year olds (crucial development years) and reinforce traditional sex and racial occupational stereotypes.

Yet if children are to maximize their potential, educators clearly need to begin early, involve parents, and use all available media to help expand career horizons and to challenge traditional sex and racial stereotypes.

Principal Investigators: Aimee Dorr Leifer
Gerald Lesser
Center for Research in
Children's Television
Harvard Graduate School
of Education
Cambridge, MA 02138

PRODUCT AVAILABLE: NIE Papers in Education and Work No. 1: The Development of Career Awareness in Children, 1976. Contact NIE for availability.

Contract No.: NIE-G-74-0057 Funding: $56,108

18. THE DEVELOPMENT OF CAREER CHOICES BY BOYS AND GIRLS

Listen to preschool kids in the sandbox and they'll tell you which jobs are right for men and women. By the time they get to elementary school, boys aim at 2-3 times as many career possibilities as girls, most of whom already limit their roles to teachers and nurses.

At the high school and post-high school level sex continues to have a strong influence on the choice of occupations. For example, senior girls ranked "helping others" as first priority in choosing an occupation; senior boys placed status and power first. Similarly males show increased interest in high prestige positions while females consistently rejected these occupations.

During early years, race and social status seem to have little impact on the goals of young children. Their occupational aspirations remained equally high, with one noticeable difference--black girls seldom selected housewife as a life choice.

Studies on the effect of race during the high school years proved to be inconsistent. Most researchers found that black students were not substantially different from white students in their aspirations or expectations. But at college entry, black students were found to hold considerably higher aspirations than their white counterparts, with black females expressing higher goals than any other group studied.

Differences created by social class appear relatively late in children, but once established, they affect choice of schooling and occupation. Lower socioeconomic status students were less likely to enter graduate school. Of those who do enter, few seek high-status careers like law

or medicine. Another study also found that sons of low-status whites tend to move to higher-status positions. Offspring of high-status whites stay in high-status positions. Offspring of high-status whites stay in high-status positions. However, among black men low-status jobs are the norm, and even blacks from "better" backgrounds tend to fall back to lower-status occupations.

How do parents affect career choice? Fathers' occupations weigh heavily on their sons' decisions. Mothers' occupational attitudes, on the other hand, have greater impact on their daughters' career plans than the mothers' actual occupations.

Role models help build aspirations, too. One study found using videotapes of career women far more effective in raising female horizons than discussion and role-playing techniques.

Little research, however, has been done to relate this information to counseling techniques. Instead of more counseling, say the authors, the need is for more effective counseling. That may suggest programs to help parents to use their influence on their children's career choices more creatively. For schools, "try using more diverse role models to overcome the limiting effects of sex, race and social class."

Principal Investigator: Rosalind C. Barnett
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PRODUCT AVAILABLE: Occupational and Educational Aspirations and Expectations: A Review of Empirical Literature, 1974. Contact the principal investigator for availability.

Contract No.: NIE-C-74-0016 Funding: $4,440

19. DROPOUTS AND GRADUATES FIVE YEARS AFTER HIGH SCHOOL--A RE-SURVEY OF A NATIONAL SAMPLE OF YOUNG MEN

What are the longer-range effects of dropping out of high school? To find out, a re-survey of the young men who participated in the Youth in Transition project was conducted. Patterns of change and stability linked to different family, high school and post-high school environments were examined in the hope of providing information relevant to public policy decisions.

Bachman's analysis of the data led him to state, "Dropping out of high school is overrated as a problem in its own right--it is far more appropriately viewed as the end result or symptom of other problems which have their origin much earlier in life. The difficulties experienced by the dropouts we studied--the low aspirations and accomplishments, and even the limitations in self-esteem and self-concept--were already present or predictable by the start of the tenth grade, and there is little evidence that dropping out made matters worse."

The conclusion drawn after studying more than 20 personality and behavior dimensions for a four-year period? There's not much evidence to support the argument that dropping out damages a young man's "mental health" and his commitment to society's values.

Dropping out does make it more difficult to get a job; however, the more important causes of unemployment are those "pervasive differences in background and ability which precede and help determine the act of dropping out." In fact, it may actually be misleading to claim that dropping out will double a man's chances of being unemployed.

What about differences in earnings between stay-ins and dropouts? "When we compared employed dropouts with employed high school graduates, we found their weekly income levels to be nearly identical."

How about job satisfaction? Of those who were employed, three-fourths of the dropouts were "quite satisfied" or "very satisfied" with their jobs, compared with two-thirds of the graduates who were expressing similar levels of satisfaction.

Does being in a vocational education program increase or decrease the likelihood that a young man will drop out of school? After looking at the data, Bachman says, "...if anything, vocational programs may have a slight tendency to reduce dropping out."

What does it mean for educators? Bachman urges that educational alternatives be expanded, allowing people to exercise their educational options whenever they're needed (at the time of the re-survey, a number of dropouts had earned diplomas or were planning to do so). In short, the problems which lead to dropping out require intervention during the grade school years or before so that young people have time to correct those problems and avoid the additional ones created by the act of dropping out of high school.

Principal Investigator: Jerald G. Bachman
Survey Research Center
University of Michigan
Ann Arbor, MI 48108

PRODUCT AVAILABLE: Progress report titled Dropouts and Graduates Five Years After High School: A Re-Survey of a Sample of Young Men. Contact the principal investigator for availability.

Contract No.: NE-G-00-0198 Funding: $158,667

20. ECONOMIC ANALYSIS OF THE INVESTMENT IN EDUCATION

Earning power is one way of measuring the economic value of education. Yet more than wages must be taken into account. Does education help farmers, laborers, housewives and students respond to rapid changes in our economy and society? According to this author, it does. Education adds to a person's ability to perceive and solve problems, including those brought on by economic change.

Although the effects of education on decision making and personal planning are hard to pinpoint, a number of studies indicate that education makes a difference in how individuals react to change. Data on housewives, for example, show that education, while not necessarily improving household management, does affect the choice of mates and determine the number of children. In addition, the more educated women are the first to accept and use innovations such as oral contraceptives.

Historically, the more highly educated settlers--such as the Dutch in Iowa--proved to be the more competent and successful farmers. And in general, the better-educated farmer is the first to try new technical advances that eventually pay off in higher yields.

For students, this analysis shows that those with a college degree are better able to deal with change than students who stopped with a high school education. College-educated persons are better able to evaluate changes in the job market and make appropriate adjustments in their own career goals.

In short, education increases the ability of people to recognize economic change and beneficially reassess their use of time and resources. Still unknown, is how education reinforces the ability

to perceive and assess economic change.

Principal Investigator: T.W. Schultz
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PRODUCT AVAILABLE: "The Value of the Ability to Deal with Disequilibria." Journal of Economic Literature 13; September 1975.

Contract No.: NE-G-00-3-0153 Funding: $76,260

21. EDUCATION, EXPECTANCIES AND EMPLOYMENT OF WOMEN AND MINORITIES

If women and minorities aren't setting high work and educational goals for themselves, it's probably because they see a real world not reflected in the average economist's labor market charts. That's the tentative conclusion of this ongoing study of job expectations that women and minorities have.

1972 national sample data collected by the Survey Research Center show that black men and women and white women hold lower expectations for themselves because they've learned through personal experience that more schooling is no guarantee of overcoming other roadblocks to new or better jobs. Because they believe their options are limited by factors beyond their control, they in turn actually don't get many high-salaried jobs or graduate degrees. This, Gurin suggests, may simply perpetuate subtle discrimination. It is certainly very different from the traditional economists' view that women and minorities do poorly in the labor market because of lack of skills, cultural background or personal shortcomings.

The twofold challenge to school people is to encourage young women and minority students to set their sights on higher goals and to help them develop the "can do" attitudes that will free them to reach those goals.

Principal Investigators: Patricia Gurin
Betty Morrison
Institute for Social Research
University of Michigan
Ann Arbor, MI 48106

PRODUCTS AVAILABLE: Education, Expectancies and Employment of Women and Minorities--1975 Year End

Report; Counseling Implications of Black Women's Market Position: Aspirations and Expectancies (with Anne Pruitt) 1975; The Role of Worker Expectancies in the Study of Employment Discrimination, January 1974.

Contract No.: NIE-G-74-0068 Funding: $70,795

22. EDUCATION, PAY AND JOB SATISFACTION

If students want careers that pay off in high job satisfaction and a high paycheck, there's no guarantee they'll find it--even with college degrees. While workers with more training may eventually make more money, they tend to enjoy fewer side benefits.

Take managers and senior staff, for instance. Salary and wages may be greater, but personal rewards like close friends on the job, words of praise from superiors and opportunities to learn new skills seem to decline as salaries move upward. Meanwhile, even though persons lower on the career ladder fuss about their small paychecks, they often enjoy their work more.

Stern's survey of four types of job-holders--accountants, office assistants, nurses' aides and supervisors--in a major-city workers' union shows how hard it is to place a dollar value on these nonpaid benefits. Even so, they show up at the top of most job-holders' want lists when asked to compare the kinds of rewards they value most.

Even though results are still being analyzed, the author suggests that unions can be expected to push harder for work conditions which promote personal growth and job satisfaction. And for school people the message is clear: Begin now to help students evaluate the trade-offs they will need to make between pay and other rewards of their future work. High salaries and good feelings don't necessarily go hand in hand.

Principal Investigator: David Stern
Childhood and Government Project
BOALT Hall
University of California at Berkeley
Berkeley, CA 94720

PRODUCT AVAILABLE: Education, Wages and Nonpecuniary Qualities of Work: Some Empirical Findings. Contact the author for availability.

Contract No.: NE-G-00-3-0213 Funding: $89,727

23. EDUCATIONAL REQUIREMENTS FOR INDUSTRIAL DEMOCRACY

If workers will be taking on a bigger role in decision making in the future, schools need to teach those skills for their job relevance--not just because they're part of a basic, liberal education.

The work environment is in a process of change. Tensions and dissatisfactions among workers have begun to reduce sharply the quality and quantity of goods and potentially threaten the stability of the economy. This increasing worker unrest is an indication of growing anger at the lack of "quality" work environments.

Sharp reductions in the goods produced is but a symptom of another complex problem: Overeducation. Some workers are simply overqualified for their jobs and unrest results. Creative and satisfying jobs are few and far between. To get around these barriers to productivity, forward-thinking employers are trying two work reforms in the name of industrial democracy: (1) increased individualization of work responsibility and (2) greater employee participation and cooperation.

Innovations companies are trying include redesign of jobs, work teams, worker choice on work schedules, choice of job assignments, job rotation and other personal incentives to increase substantially the degree of worker participation in decision making.

Interestingly enough, many of these reforms are similar to innovations that some schools already use: Individualized instruction, open schools, team teaching, alternative schools and differentiated staffing. As young people experience these kinds of options during formal

education, they may be anticipating similar reforms in the workplace. Determining which of these best meets the requirements for workers in a democratized environment will be the focus for the next stage of this study.

Still, the study says, the majority of young workers today are not prepared for the changes which are in store for them. If managers begin to require increased self-initiative, less specialization, greater cooperation and shared participation, the foundations must be laid now.

Principal Investigator: Henry Levin
Center for Economic Studies
475 Kinsley Avenue
Palo Alto, CA 94301

PRODUCTS AVAILABLE: 18 Month Report: Educational Requirements for Industrial Democracy. "Sex Role Socialization and Work Roles: The Experience of Women" (Discussion Paper 74-1); "Socialization to Occupational Roles" (Discussion Paper 74-2); "The Transformation of Adulthood: Its Implications for Youth" (Discussion Paper 74-3). These and other related papers are available through the Center for Economic Studies and through ERIC.

Contract No.: NE-G-00-3-0205 Funding: $158,941

24. EDUCATIONAL REQUIREMENTS FOR THE PUBLIC SECTOR

Knowing the labor market--the kind of worker being hired and the characteristics of jobs available--provides clues for needed changes in educational requirements.

Focusing on labor market data from 1960-1970, this analysis points to the type (sex, race, income and educational level) of persons being hired, the growth of certain types of jobs, the educational and income levels of workers and the increased importance of public employment.

Government jobs have grown substantially in the last 30 years. They now play an important role in determining the composition of the of the labor force--particularly for women and minorities. Formerly limited to nonprofessional and menial positions, women and minorities are now finding increased managerial and professional opportunities thanks to government hiring and advancement guidelines.

Other noteworthy facts:

- The public sector rather than the private sector is absorbing a major portion of the hiring of women and minorities, particularly in professional and management positions.
- If trends continue, by 1980 women will comprise 50 percent of the public workforce.
- The growth of professional positions has been particularly rapid in government, and an increasing number of women workers are being hired for these openings.
- Educational requirements for all occupational categories continue to increase except in

the employment of young black male professionals. The intense recruitment of blacks has resulted in a drop of approximately one year in the average educational requirement of this group.

- Salaries for young male professionals are on the increase. However, white male public sector professionals are still paid less than private sector professionals. Women and minorities are paid more in the public than private sector.

For career educators the message is two-pronged: Help young people recognize career possibilities in government and reassess educational programs in light of growing opportunities for women and minorities.

Principal Investigators: Laura Best
Martin Carnoy
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Center for Edonomic Studies
457 Kinsley Avenue
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PRODUCT AVAILABLE: Interim Report 1975. Final report due in September 1976. Contact authors for availability.

Contract No.: NIE-G-74-0078 Funding: $37,314

25. EDUCATIONAL SYSTEMS - ADULT SOCIETY

Just about every youngster wonders why she or he must go to school. Helping young people see the relevance and purpose of education is the ultimate goal of which this study is a part.

Two basic premises underlie the programs of "Toward an Educational System Articulated with Adult Society." The first holds that if education's purpose is to prepare people for meaningful roles in adult society, then school activities must relate to activities students will encounter when they leave the school setting to join the adult world. The second premise is that "ergometrics," an established technology for quantitative activity analysis, can help translate and organize information about adult activities into appropriate and useful educational programs for the still-in-school set.

The book, Systematically Derived Dimensions of Human Work, summarizes the results of researchers' analysis of work activities and conditions. Aimed at helping school people develop educational activities through which students gain realistic understanding about the world of adult work, this book is the forerunner of a set of 12 occupational exploration booklets for classroom use still under development.

Contact North Carolina State University's Center for Occupational Education for anticipated publication dates.

Principal Investigators: R.R. Boese
J.W. Cunningham
Center for Occupational Education
North Carolina State University
Raleigh, NC 27607

PRODUCT AVAILABLE: Contact the Center for the availability of the 12 reports.

Contract No.: NE-C-00-3-0070 Funding: $254,728

26. EFFECTIVENESS OF MODEL OFFICE, COOPERATIVE EDUCATION AND OFFICE PROCEDURES COURSES BASED ON EMPLOYEE AND EMPLOYER SATISFACTION EIGHTEEN MONTHS AFTER GRADUATION FROM HIGH SCHOOL

After you've learned typing, shorthand, filing and bookkeeping in high school or a community college, what's the best way to learn the work habits and attitudes essential to successful employment?

Business office education programs typically use one or more of the following training approaches after students finish the basics: (1) a sequence of office procedures courses, (2) work in a model office in the school where students simulate tasks of a hypothetical company and (3) cooperative office education where students gain on-the-job experiences to extend classroom work.

In theory, the closer one gets actually to performing the work required, the more rapid, durable and relevant the learning. Others have argued that a good simulation is as effective as a good cooperative education experience. And some hold that a good office procedures program is as effective as simulation.

In a survey of the on-the-job performance of about 550 graduates enrolled in the three types of programs (and their 200 employers), one finding stood out: Graduates of each approach can handle typing, shorthand, filing and bookkeeping tasks, but most fell down sharply on personal adjustment skills (attitudes, interpersonal relations). While programs using one or more of the three training approaches say they integrate job skills, office knowledge and work habits, performance on the job 18 months later indicates that all three approaches are falling short of what's needed in personal adjustment.

Two other findings are noteworthy:

- Graduates of all three programs have about the same labor market experience in terms of salary, wages, number of people supervised and employment rates.

- But, the type of course taken did make a difference in future plans--in whether the student planned to stay in office work (cooperative office education graduates), planned to pursue additional office education training (true of model office graduates) or used training as a stepping stone to other objectives (true of office procedures graduates).

One implication: In terms of teaching basic job skills all of the three approaches are doing equally well, but there's still a need to help students learn how to behave on the job and get along with co-workers.

Principal Investigator: Gary McLean
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270 Peik Hall
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PRODUCT AVAILABLE: Effectiveness of Model Office, Cooperative Education and Office Procedures Courses Based on Employee and Employer Satisfaction Eighteen Months After Graduation From High School.

Contract No.: NIE-G-74-0089 Funding: $13,288

27. EFFECTS OF EDUCATION ON THE OCCUPATIONAL ACHIEVEMENT OF VARIOUS ETHNIC GROUPS

Americans believe education is the great equalizer--the way men and women of different ethnic groups can make the American Dream come true. Is it working? Using 1970 population census data, the effect of education on job holding and income for various social sub-groups is now being analyzed.

With 200 pieces of information in hand on over two million persons, results should hold great significance for national planning and policy. But it also makes for painstaking progress. Early indications are that education has a very powerful positive effect on a person's career once other factors are held constant. But variations do exist among racial groups. Being married, single, a parent or non-parent also makes a difference in job access and earning power. Considerably more work will be necessary to explain these differences, however.

For women the effect of part-time work appears to be very significant, but the specifics of this are still unclear. Further, if discrimination is important in explaining occupational choices and earnings in the labor market-at-large, researchers are speculating at this point that its effects will be weaker in government-related work where access and earnings are more controlled. If this is true, women who are Federal civil service employees, for instance, should earn more than women employed in the private sector.

With completion of this study set for December 1976, planners can look forward to using the information as they develop programs for 1978.

Principal Investigator: Geoffrey Carliner
University of Western Ontario
London, Ontario N6A 3K7

PRODUCT AVAILABLE: Progress Report: Effects of Education on the Occupational Achievement of Various Ethnic Groups. Contact the principal investigator for availability.

Contract No.: NIE-G-74-0090 Funding: $43,220

28. EFFECTS OF SOCIAL CLASS BACKGROUND ON THE CAREER COMMITMENT OF WOMEN ATTENDING NON-ELITE COLLEGES

Women from working-class backgrounds often hope to earn college degrees, but will they later go on to realize their career potential? The answer for many is "No," according to 289 women at a state college.

First of all, women tend to choose "feminine" occupations, and thus they desire to enter career fields such as teaching that are already overcrowded. Even when college counselors tell them that such fields are essentially closed, they persist in preparing for them anyway.

Why do they do this? Apparently because parents steer them at an early age toward jobs that are "good for women." Then too, the college curriculum may not offer nontraditional career options.

Because career aspirations are narrowed at an early age, recommendations include involving parents in school career education programs and bringing children into contact with men and women who are in careers atypical for their sex. By making students aware of labor market realities at an early age--before they have closed their minds to career options--and by providing information about these options, it may be possible to encourage girls to make truly responsible choices.

The working-class women in this sample do not generally let their career take precedence over their roles as wives and mothers. While many hope to pursue careers outside the home at some point, they are unrealistic about the extent to which their family commitments will prevent them from meeting their career goals and vice versa.

The author suggests that career education be redefined as lifestyle education to help women and men see the demands of home and career on their lives and then make realistic choices about the lives they wish to lead. They should be encouraged to ask themselves such questions as: "Do I want to marry? Do I want to have a career? How can I reach both of these goals?" Teachers should help them make these choices and encourage women who have successfully balanced career and home commitments to be role models in career education programs for women.

Principal Investigator: Mary J. Guttmacher
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123 Mount Auburn Street
Cambridge, MA 02138

PRODUCT AVAILABLE: Final report in progress.

Contract No.: NIE-G-74-0041 Funding: $13,629

29. AN EMPIRICAL ESTIMATION OF THE IMPACT OF ALTERNATIVE POSTSECONDARY EDUCATIONAL POLICIES

Major increases in college enrollment occurred in the 1950's and 1960's. The reasons for this growth include liberalized admissions policies, new and more accessible two- and four-year colleges and the Viet Nam war.

The primary public policy determinant of college attendance rates is the level of tuition at public colleges. For married men and women over 25 lowering tuition at local two-year colleges from $400 to zero doubled 1970 college attendance rates. Another study found that lowering tuition by $200 in 1961 raised the aggregate college attendance rates of recent high school graduates by more than 14 percent. Young people of middling ability and from low-income backgrounds were found to have the largest response to the level of tuition. This means a higher education subsidy scheme is most efficient if it focuses its aid on these groups.

Admission policy of local colleges--especially the local two-year college--were found to have major impact on attendance rates. If local public colleges are "open door," the attendance rates of adults is sometimes a third higher. The college entrance rate for recent high school graduates is about 10 percent higher. Even if it is not open door, the mere existence of a local public college has substantial impact on college attendance. Enrollment rates of married men and women over 25 double if the SMSA has a public two-year college.

A number of striking determinants of adult attendance were uncovered. Presumably because of the GI Bill, Viet Nam veterans were three times more likely to be attending college. Women who have worked for pay at some time in the past ten years were much more likely to be attending college.

This suggests that women see college as a way to career advancement.

Principal Investigator: John H. Bishop
Institute for Research on Poverty
University of Wisconsin
Madison, WI 53706

PRODUCT AVAILABLE: Can Adults Be Hooked On College? Some Determinants of Adult College Attendance (Paper 319-74); Income, Ability and the Demand for Higher Education (Paper 323-75). Available from the author.

Contract No.: NIE-G-74-0100 Funding: $66,296

30. ESTABLISHING DIRECTIONS AND PRIORITIES FOR SCHOOL-BASED CAREER EDUCATION

Career education seems more vulnerable to criticism than most educational reforms. The reason: It sits astride many fundamental dilemmas of American society--the political ideal of freedom and independence for the individual is not always compatible with the efficiency and productivity demanded by the economy. Since career educators must take a stand on the issues--should the "work ethic" be reinforced or abandoned for instance--they probably will continue to draw the fire of the movement's critics.

But the outlook may not be as bleak as it seems. The authors saw an "underlying consensus" of where career education priorities should be placed, though some practitioners may not agree. Career education should:

- Bring together people and jobs. The importance of work and occupation is gaining greater recognition from scholars and practical people in many fields. If career education helps people make better career decisions, it may contribute greatly to individual and national well-being.

- Develop awareness and capability for adult roles. Young people need to know how to function as adults and be recognized as adults in this society. Career education should help expand student contacts and interactive experiences with adults in a variety of roles including work roles. Young people need ways to "try on" these roles in circumstances where early failures will not be damaging.

- Create diverse routes to publicly recognized masteries. Modern society demands many

talents of its workforce, but schools nurture only a few. These may be in oversupply. "By bringing into school awareness and encouragement of masteries in the world outside school, career education can provide avenues to recognized accomplishment for more students, develop more talents, ease unnecessary competition among students--and--provide the economy with workers with diverse competencies."

- Enable students to comprehend, cope with and influence the economic-social-political system. If individuals have no conception of the system of which their actions are a part, they cannot act in society's or their own best interest. Youth need to know how their decisions affect society.

- Assist in the acquisition of the means for self-support. Young people who don't go to college join the workforce, join the unemployed, or become part of a "mysterious and apparently growing body of teenagers who are not employed and who do not look for work." These last groups are often--but not always--public problems as well as personal problems to themselves and their families. If career education helps them learn to support themselves through honest work, it will help meet critical social needs.

What specifics will accomplish all this? While there's no single "right" way of doing things, suggestions include providing training in skills for the range of careers between the low-paying menial tasks and the high-paying professions so 16- and 17-year-olds could leave school with the means for honorable self-support. Whether youths would choose to use such skills for income during college, for lifelong self-support or not at all would be the option of the individual.

The second portion of the report suggests guidelines for curriculum development based on "an alternative to bare statement behavioral objectives" intended to help developers and funding agency reviewers alike.

Principal Investigator: Joseph Schwab
Center for the Study of
Democratic Institutions
Box 4068
Santa Barbara, CA 93103

PRODUCT AVAILABLE: Career Education: The State of the Idea and Its Prospects for the Future (with E.W. Eisner and Decker Walker), October 1974.

Contract N.: NIE-C-74-0048 Funding: $38,936

31. EVALUATING THE RETURNS ON THE EDUCATION OF WOMEN

Is the thought of future higher incomes driving many millions of young women to the nation's college campuses? The answer is a clearcut no, making a closer look at female education and earning power necessary.

Statistics indicate that for women, a year of education increased the hourly wage rate by seven percent. This compares to a 3.1 percent increase for men per year of education attained. A college degree increases women's wages by twice as much as men's, for both blacks and whites. This result, which indicates a statistically higher average return for women and no lower returns by race, is in striking contrast to earlier estimates of the return to education. A high school diploma increases the wages of white women relative to white men, and black men relative to black women. It follows, then, that since white women have the highest return on high school, they also have the largest proportionate attendance and are less likely to drop out than other race/sex groupings. Indications are that black women experience the greatest increase in wages from a college degree, but they are less likely than white men and women to receive the degree.

If the returns on education look so good, why aren't women's earnings statistics rosier? Information presented here shows that the personal characteristics most likely to screen one out of a wage-optimal occupation is being a woman, while the characteristic most likely to get one <u>into</u> a wage-optimal occupation is being a man. In terms of specific occupations, women are more likely than men to be screened from the professions regardless of education or race, and they are more likely to be overrepresented in clerical and service occupations. There is no evidence that

there are differences in general ability favoring men over women which would substantiate a claim that there is a shorter supply of college-ability women than of men.

So why aren't more women in college? One explanation is that there are differential opportunities to attend college--or a form of nonmarket discrimination--operating against women. The opportunities may be fewer for women because colleges discriminate, because funding sources (parents, scholarships, etc.) discriminate, because high school counselors discriminate, or because other socialization processes make women less likely to see themselves as college material.

What can schools do? Help women enter and succeed in college programs, providing moral support and financial aid when needed. Chances are their attendance will improve and they'll complete the entire program, if these survey findings hold up. High school counselors should avoid steering girls into "women's work" jobs when better-paying fields are just as viable. With parent, teacher and peer support, girls can visualize themselves as competent college graduates, earning as much or more than men if they strive to overcome the hurdles before them.

Principal Investigator: Janice Fanning Madden
Regional Science Department
University of Pennsylvania
Philadelphia, PA 19147

PRODUCT AVAILABLE: The Role of Wages and Occupation in Determining the Education of Young Women and Men Workers. Contact the principal investigator for availability.

Contract No.: NIE-G-74-0094 Funding: $25,843

31. EVALUATION OF THE COMPREHENSIVE CAREER EDUCATION MODEL

Give people the chance to try career education on for size and they'll like the way it looks and fits.

That's the overriding conclusion of Brickell and associates who followed the multi-year development of CCEM (the Comprehensive Career Education Model). What do people in the six test communities think? Career education does make a difference in their lives--particularly among teachers and students who are involved in it day by day.

Brickell's study--including one report titled Attitudes Toward Career Education (October 1973)--shows that students welcome career education activities because they give a dose of reality to learning. Teachers, too, are convinced of the value of career education once they're involved. Parents are favorable, yet some parents question whether it's right to grant credit for work experience youngsters receive in the community, and wonder if weaving career education into the regular curriculum is better than maintaining separate courses. Brickell believes, however, that if staff can show parents and community people that nothing is being lost by the infusion of career education, career education should be accepted.

Brickell sounds one note of caution about the high marks that persons in the six developmental sites gave to CCEM: Their favorable attitudes could have been influenced by the fact that these communities were in on the ground floor of a national priority and received substantial publicity, federal support and professional assistance from the Center for Vocational Education.

The six school districts who helped build CCEM learned some useful things that other communities

should know. Four findings noted by Brickell stand out:

- Even though you need local career education advocates whose ideas are respected, it's also important to have administrators who really believe career education must happen. Use of outside experts also helps.

- Staff prefer flexible materials from other sources as a starting point for building their own.

- Teachers will not use community resources without assistance.

- Formal evaluation may not be essential, partly because some career education outcomes--such as "self-understanding"--are difficult to measure.

A separate report developed by this contract called Data For Decisions (March 1974), asks the question, "Who really needs to know what evaluation information on programs like these--and when do they need it?" In large Federal projects like CCEM, says Brickell, everybody naturally wants evaluation information as soon as possible. What people need to know depends on how far up the line the decision maker sits. A general rule of thumb offered to evaluators by Brickell: Write a one-sentence summary, a one-page summary, and a ten-page summary based on your 100 pages of findings. Then, put yourself in the shoes of the person who is to read it in order to see which version provides the essential facts needed at that particular time.

Another special report titled "A Review of the Developmental Program Goals for the Comprehensive Career Education Model" (August 1973) illustrates the continuing debate over career education as a concept. Brickell's staff assembled two blue-ribbon panels of "outsiders" to examine a set of

over 1,000 goals that shaped the design of CCEM and that are still used in career education efforts today. College professors and curriculum experts generally agreed the goals were too ambitious and ill-conceived ("over reach, over-promise, and over-kill" said one) while state legislators, university leaders, local school board members, superintendents, employers and teachers generally thought it was about time such outcomes were addressed despite the difficulties. The report does not contain the actual goals but summarizes reviewer responses.

Principal Investigator: Henry Brickell
Policy Studies in Education
52 Vanderbilt Avenue
New York, NY 10017

PRODUCTS AVAILABLE: Profiles of CCEM Locations; A Review of the Developmental Program Goals for the Comprehensive Career Education Model; Attitudes Toward Career Education; Data for Decisions. Contact the principal investigator for availability.

Contract N.: NE-C-00-3-0054 Funding: $359,827

33. EXPERIENCE-BASED CAREER EDUCATION

For high school students who want to learn firsthand what it's like to be a job holder in today's complex world, NIE has developed and tested a unique alternative: Experience-Based Career Education (EBCE).

While career exploration is an important feature of the program, the concept has become in most cases synonymous with comprehensive secondary education itself. Youngsters at most EBCE test sites are meeting all the requirements for high school while gaining many of the competencies for eventual job entry, postsecondary education and family responsibilities as well.

EBCE differs from most alternative secondary school programs by balancing academic, personal and vocation development. Using the world of work as a way to tie these three elements together makes EBCE different from vocational programs, too:

- EBCE emphasizes career exploration, with site and job rotation, rather than single work experiences.
- EBCE emphasizes the development of general rather than job-specific career skills.
- EBCE is targeted to all students.
- EBCE learning activities in the community combine vocational learning with academic and personal learning objectives.
- EBCE allows students a major role in shaping their programs in the community.
- EBCE community participants and students are unpaid.

Students, parents, community resource persons and staff in Oakland, California; Tigard, Oregon; Philadelphia, Pennsylvania; and Charleston, West Virginia proved EBCE could work beginning with the 1972-73 school year. Now, hundreds of graduates later, the idea of students and adults working and learning together outside the traditional school classroom has spread throughout the nation to dozens of school districts, large and small.

What can students in EBCE learn as they spend from one day to three months at various workplaces in a community? Things like:

- learning and applying scientific principles in immunology at a medical laboratory, and in ecology with a naturalist at a state park;
- taking abstractions from textbooks about marketing, weights and measures, consumer rights or supply and demand; and finding out what they mean to butchers, supermarket buyers, advertisers and consumer action agencies;
- learning how to use a slide rule to make quick cost estimates at a printing company, compute board feet at a lumber yard or make equivalents between inches and metrics at an auto mechanic's shop;
- developing writing and interviewing skills with a political journalist while studying city government firsthand.

Evaluation studies conducted by the developers, visits by outside reviewers and an external evaluation conducted by Educational Testing Service have substantiated what students, parents, employers and graduates say: The program helps adolescents make the transition to adulthood in ways that traditional

schools usually do not duplicate. Besides meeting regular graduation requirements, EBCE helps students--no matter what their backgrounds or career aspirations--become more self-confident, better able to communicate and relate to adults and better able to manage their own time and learning activities.

EBCE materials and training options are best obtained by contacting the original developers:

Harold Henderson
Appalachia Educational Laboratory
P.O. Box 1348
1031 Quarrier Street
Charleston, WV 25325
Contract No. NIE-C-00-4-0008

Robert Peterson
Far West Laboratory for Educational Research and Development
1855 Folsom Street
San Francisco, CA 94103
Contract No. NIE-C-00-4-0009

Rex Hagans
Northwest Regional Educational Laboratory
710 S.W. Second Avenue
Portland, OR 97204
Contract No. NIE-C-00-4-0010

Michaelita Quinn
Research for Better Schools
1700 Market Street, Suite 1700
Philadelphia, PA 19103
Contract No. NIE-C-00-4-0011

And, since EBCE is being installed in almost every state, interested persons might contact the career education coordinator at their state departments of education for names of demonstration sites in their local areas or regions.

34. EVALUATION OF THE MOUNTAIN-PLAINS EDUCATION & ECONOMIC DEVELOPMENT PROGRAM, INC.

More than two million rural families with incomes below the poverty level would qualify for a Mountain-Plains approach to family-centered life preparation. This two-year external program evaluation has three distinct elements. Part I is a followup study of those families who complete the Mountain-Plains program as compared with those families who leave the program early, and with a comparison group of families who met entry requirements for the program but were not admitted. Abt has conducted some 1,000 interviews with families at intervals of 6, 12, 18 and 24 months, depending on when they left Glasgow.

Part II of this study asks the question: "If a Mountain-Plains type program were available anywhere in the country, how many families with backgrounds similar to those presently admitted to Mountain-Plains would be eligible?" Criteria used in making this estimate are families with heads of household (chief breadwinner) aged 18-49, who are physically and mentally able to work, who have at least a primary education, whose income is not more than 1.5 times the official poverty level and who reside in a rural area.

Results indicate a largely forgotten population in America might enroll if a Mountain-Plains program were available in their region. About 2.3 million families representing some 11 million individuals met the above criteria using 1970 census data. Women are the heads of household in 23 percent of the family units.

About 62 percent of all heads of household have completed high school, while only 20 percent reported an 8th grade education or less. Their average total income was $3,800 in 1970. The study notes that, contrary to popular opinion,

this population is not "lazy, indolent and taking a free ride on the welfare rolls". They have a larger percentage of family heads working than the national average--and often over 40 hours a week at that.

Part III of the study--also still in progress--is an examination of four programs similar to Mountain-Plains to see how costs and services can be compared.

Principal Investigator: Richard L. Bale
Abt Associates, Inc.
55 Wheeler Street
Cambridge, MA 02138

PRODUCTS AVAILABLE: Contact Abt Associates, Inc. for the status of the three components of this study.

Contract No.: NIE-C-74-0102 Funding: $785,128

35. A FACILITIES HANDBOOK FOR CAREER EDUCATION

Could a run-down, abandoned old store front building regain a happy, useful and exciting life? Yes--as a career education facility.

In 21 career education programs around the country, effective activities are operating out of facilities as diverse as the projects which inspired them. The handbook shows how administrators can create environments for career education and how community resources can be utilized effectively.

The floor plans, photographs and descriptions in this book demonstrate how school staff imagination and commitment can create an auto repair training center or a mobile model of a loan company office. In Gig Harbor, Washington, elementary school children learn horticultural skills in the World of Work Greenhouse. In Bowling Green, Kentucky, students' career education activities are integrated with other studies--every subject is made relevant to the world of work and no special facilities are required.

All of this suggests that the goals and characteristics of career education have implications for physical settings. An active learning process geared to the real world must provide opportunities for students in diverse environments inside and outside the school. Adequate planning to ensure a variety of options for students is most important, say the authors. A facility need not be expensive or lavishly equipped. It may be a modified classroom or a network of placement locations in the community, but what it is must be determined through a well-organized planning process.

Three programming/planning process models are described--the Charette, the Generic Planning Model and the CRS model (developed by the firm of Caudill, Rowlett and Scott). Each model emphasizes broad

community involvement. The Generic Planning Model and CRS identify several steps to "problem seeking." Among these are 1) goal development, 2) needs assessment, 3) problem analysis, 4) generation of alternatives, 5) selection of policies/programs, 6) implementation and 7) evaluation.

What comes through clearly in this practical publication is that there is no single formula or facility that will work in all schools. Local school people and their communities need to carefully explore, plan and develop facilities according to local needs and resources. This book provides a broad perspective on 21 of many possible solutions.

Principal Investigator: George Gage
System Development Corporation
2500 Colorado Avenue
Santa Monica, CA 90406

PRODUCT AVAILABLE: NIE Papers in Education and Work: No. 2: Facilities Handbook for Career Education.

Contract No.: NIE-C-74-0143 Funding: $88,029

36. FIELD TEST AND REVISION OF COMPREHENSIVE CAREER EDUCATION MODULES

Based on teacher, school and publisher surveys, career education materials should be inexpensive, easy to use and geared to what's already happening in American classrooms.

By and large, teachers want lesson plans and units that are short, simple to prepare, easy to give students for independent study and visually appealing to everyone. Professional educators don't want to be told they must do something in a particular way and are concerned that career education fit in with the school district's instructional mission.

While its charge was to field test and revise the bulk of curriculum units originally developed as part of the Comprehensive Career Education Model, American Institutes for Research is quick to point out that like the other 29 units* the guides are not designed to be the final answer. But for school districts considering career education, they should help point the way for gradual K-12 career education infusion.

As part of its study, AIR discovered that most school systems will at best be able to budget only about $10-12 per classroom per year for career education materials. They found that teachers like handbooks which include reproducible materials and which give them flexibility in classroom adaptation.

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*The other 29 units are presently available from the Center for Vocational Education (CVE). Over 100 units spanning all grade levels and subject areas were originally developed by CVE and the six cooperating school systems. About 60 were transferred to AIR for revision and testing.

Administrators are concerned about how much training of teachers will be required if career education is to be easily infused into existing curriculum. Both groups like publications that are short and to the point with good organization and graphics.

As a result of their field test--involving over 16,000 students and their 527 teachers in 31 school districts in 3 states--AIR staff revised the 61 units it tested into some 130 modules for grades K-12. Lessons were rearranged, alternative learning activities were suggested, cost reductions were made and overall visual appeal was improved. The language in student materials was also simplified and reading levels reduced thanks to suggestions by curriculum experts. Topical areas like "Understanding and Directing Self-Development," "Responsibilities as a Worker and Citizen" and "Personal Planning and Goal Pursuit" are covered.

Principal Investigator: James Dunn
American Institutes for Research
P.O. Box 113
Palo Alto, CA 94302

PRODUCTS AVAILABLE: Project complete. Contact the publisher, American Learning Systems, 1106 Jeanette Avenue, Columbus, Georgia, for further information.

Contract No.: NIE-C-74-0142 Funding: $960,441

37. FIFTEEN YEARS AFTER HIGH SCHOOL--THE IMPACT OF ADOLESCENT SOCIAL SYSTEM ON SUBSEQUENT OCCUPATIONAL ACHIEVEMENT

The words "high school" conjure up different memories for different people. But how did those high school experiences and friendships affect the lives of people five, ten or fifteen years later? Temme is seeking the answers to that provocative question by tracking how the adolescent years affect career decisions later on.

Coleman's study of midwestern high school students, Adolescent Society, which began with an original survey in 1957, provides a continuing source of data for this longitudinal effort. Social values and attitudes, educational aspirations, ability, experiences and the high school social structure of the 1957-58 scene were Coleman's key topics. Temme's re-survey is gathering data on subsequent educational, occupational and social experiences which, when completed and analyzed against the original data, will shed considerable light on how those nearly forgotten attitudes and events at 16 shape the life of the 35-year-olds. Of special interest will be follow-up study reports on career decision-making patterns of women and mid-career development for both men and women.

There are two publications at present. The first, Occupation: Meanings and Measures, has two purposes: 1) to add to systematic knowledge about occupational structure as a feature of society and 2) to develop methods and measures for advancing our understanding of the world of work and how the individual progress through it--psychologically, socially and economically. The second book, The History and Methodology of the Adolescent Society Follow-Up Study, documents and describes progress to date, as well as specifying

procedures, technical problems encountered by researchers and strategies used to overcome them.

Educators--career educationists or not--will be anxiously awaiting more results of this signal study.

Principal Investigator: Lloyd Temme
Bureau of Social Science Research, Inc.
1990 M Street, N.W.
Washington, D.C. 20036

PRODUCTS AVAILABLE: Contact Dr. Temme at the Bureau of Social Science Research, Inc. for further information.

Contract No.: NIE-G-74-0006 Funding: $164,640

38. A HISTORY OF ADULT DEGREE PROGRAMS, 1945-1970

Adults are returning to U.S. campuses in increasing numbers. How has higher education responded to the demands placed on it by mature learners?

After looking at the British and American roots of degree programs for adults, Hall describes how U.S. colleges and universities developed special baccalaureate programs. The two world wars created a need for large numbers of trained people. Evening and extension programs sprouted during the 1950's as enrollment swelled.

While the G.I. Bill made it possible for veterans to pursue college degrees, it also highlighted the differences between adult and adolescent students. The learning which veterans could demonstrate upon their return from military service encouraged institutions to experiment with credit for life experience.

Hall selected eight programs which as a group form a bridge between the extension degree programs of the early 1900's and the nontraditional assessment programs of the 1970's and beyond. Two approaches to the curriculum design of special baccalaureate programs have emerged.

One set of programs--Brooklyn College, Queens College, Mundelein College and Roosevelt University--relied on existing courses for their curriculum. The other set of programs--University of Oklahoma, Syracuse University, Goddard College and University of South Florida--created curricula which departed substantially from what already existed and were delivered to students through independent study.

There were problems during those early years--funding, fluctuating enrollment and concerns of traditionalists. In the mid-1970's some of these

problems still require more work. But, Hall concludes, the efforts of special adult programs have helped create a more favorable climate for the adult student on U.S. college campuses.

Principal Investigator: James C. Hall
College of Continuing Education
Roosevelt University
430 South Michigan Avenue
Chicago, IL 60605

PRODUCT AVAILABLE: A History of Baccalaureate Programs for Adults, 1945-1970. Available from ERIC (#ED101-607).

Contract No.: NE-G-00-3-0199 Funding: $9,997

39. HOME/COMMUNITY-BASED CAREER EDUCATION PROJECT

Many adults already in school or working want accurate, up-to-date information when making career choices. While such information is not often readily available, adults who spend most of their time at home find career guidance particularly hard to get.

In Providence, Rhode Island, a unique adult counseling service is providing one answer to the question of access to career guidance--personal counseling via the telephone. To date over 6,000 adults have benefited from NIE support of this career and life-planning service.

As one young mother said, "I wasn't able to really put things together. I didn't know where to start. I didn't know what was available." For her and other home-based adults, a well-publicized telephone number has been the central contact with skilled paraprofessional counselors and support staff who provide individualized career and educational information.

The focal group for phone counseling was people 16 years of age and older who were neither working nor attending school full-time. There was particular emphasis on reaching home-based women, young people searching for a career, and the elderly.

A prime goal was to attract individuals who had little or no access to personal planning resources and provide them--via telephone--with information on how to make career decisions and nearby resources that would help. To accomplish this, the project's staff organized to:

- Advertise counseling using a broad-based media campaign including television and newspaper coverage.
- Collect up-to-date information about local education and training opportunities,

publishing the findings in a variety of resource guides.

- Develop a Resource Center with extensive adult career education materials.

- Collect and analyze data on the characteristics and needs of home-based adults and critique how well the counseling service worked.

Who used the counseling service? Clients were predominantly white (93 percent), female (75 percent), married (51 percent) and between 20 and 35 years of age (67 percent). While about two-thirds of the clients had no preschool children, slightly over one-half did have children under 18 living at home. In general, clients came from lower income families with almost two-thirds reporting incomes under $10,000 a year. Despite low incomes the clients tended to be better educated than the Rhode Island population at large, with about one-half completing high school and over one-third having attended some college.

Those evaluating the project's services found that participants were enthusiastic about the counseling provided. Attracted in large part by commercial television and newspaper coverage, participants averaged between three and four telephone interviews throughout the counseling process. The overwhelming majority also expressed support of using the telephone rather than face-to-face contact, specifying the convenience of telephone communication.

In reviewing the results of counseling, evaluators noted that four out of ten (39.5 percent) of the clients had implemented a career or educational plan, 21 percent had enrolled in education and 18.5 percent had taken a job. Many more had made application for educational programs or were actively searching for employment.

Participants generally agreed that useful education and training information along with sound career

guidance was crucial to the service's success. Adults also emphasized the importance of warmth, friendliness and helpfulness in counselors. Clients repeatedly mentioned that counseling had given them "a better idea of what to do" and "more confidence to do it," and there was strong support for some of the unique publications put together by the project like Women and the World of Work, From Liberal Arts and Sciences to Careers and External Degree Study: A New Route to Careers. In addition, the project staff has developed a series of five manuals to guide the planning of similar adult career counseling programs throughout the country.

Principal Investigator: Vivian Guilfoy
Education Development Center
55 Chapel Street
Newton, MA 02160

PRODUCTS AVAILABLE: NIE Papers in Education and Work: No. 12: Home-Based Career Education. Available in January 1978 from NIE.

Contract No.: NE-C-00-3-0121 Funding: $2,578,907

40. THE IMPACT OF COLLEGES AND UNIVERSITIES ON THE EDUCATIONAL ASPIRATIONS OF WOMEN

How do educational aspirations develop and change in undergraduate men and women? To date the research and sociological theories on aspirations have applied primarily to male undergraduates. Little is known about the possibly unique influence of college upon women.

The two major but opposing theories of education aspirations--namely "environmental press" and "relative deprivation"--predict the effect different types of schools have on student motivations. The "relative deprivation" theory states that the keener the academic competition and the worse the student does, the lower the student's self-concept and aspirations. The theory of "environmental press" presents an opposing view and says that stiff competition at elite schools is strong motivator and, despite the possibility of low grades for some, all students on those campuses gain higher future aspirations.

Which one of these theories is most valid for college women? In an initial subsample some interesting trends appeared. Men tended to place greater emphasis on grades in evaluating their academic self-worth. Women on the other hand were less affected by grades and more influenced by high scholastic test scores (comparison of superior students nationally), to substantiate their abilities.

Data on 60,000 college students used to further check out the respective theories, had disappointing results. Neither "relative deprivation" nor "environmental press" provides a very satisfactory explanation for the development of undergraduate educational aspirations. Undergraduate men and women did not seem to have different reference groups--i.e. individuals against whom they compared themselves to determine their respective academic abilities. Nonetheless the fact remains: Far fewer

women received advanced degrees than did men. Why this happens is a topic needing further careful study.

Principal Investigator: Michelle Patterson
Department of Sociology
University of California
at Santa Barbara
Santa Barbara, CA 93106

PRODUCT AVAILABLE: The Impact of Colleges and Universities on the Educational and Occupational Aspirations of Women. Contact the principal investigator for availability.

Contract No.: NE-G-00-3-0200 Funding: $10,904

41. THE IMPACT OF EDUCATIONAL ATTAINMENT ON FERTILITY AND FEMALE LABOR FORCE BEHAVIOR

What government policies would change married women's participation in the labor market? To date, there's no clear answer.

Most studies of the relationship between education and earning have concentrated on men, shedding no light on the economic impact of parenthood, for instance, for a mother with a master's degree in history.

A main part of this task was development of a model to predict the potential wage offers to women not now in the labor market. Researchers looked at three basic questions: What are the costs and benefits of education in economic terms? If not-in-the-labor-force women entered the labor market, would they receive benefits similar to those presently working? What is the economic cost to women of bearing children?

The availability of married women in the labor market is lower during their child-rearing years, so these years probably reduce the lifetime earnings of women. But the fact that there's little satisfactory data on wage rates by sex and age seriously limits an examination of married women's lifetime earnings. However, the major empirical finding here implies that the introduction of tax subsidy schemes--a negative income tax, for example--might only slightly alter the numbers of married women working in full-time jobs outside the home, and thus be of little value in equalizing participation in the labor force between the sexes.

One thing is certain, however. Since we do tinker with the tax system, we need to know how the changes we make will affect both women's and men's labor market behaviors. And that, says Schultz, requires much more study.

Principal Investigator: T. Paul Schultz
Department of Economics
Yale University
New Haven, CT 06510

PRODUCT AVAILABLE: Understanding the Labor Market Behavior of U.S. Married Women. Contact the principal investigator for availability.

Contract No.: NE-G-00-3-0212 Funding: $92,021

42. INCREASING EDUCATIONAL WORK EXPERIENCES FOR YOUTH

Well-designed student work opportunities can offer experiences which are nearly nonexistent in our present public school system--opportunities to observe and participate in important decision making, to fulfill socially useful roles and to relate to a variety of influential, competent adults. Such work experience, says Silberman in this "think paper," can also help students:

- develop self-reliance, assertiveness, personal competence, responsibility and interpersonal skills;
- learn personal responsibility;
- prepare for meaningful and useful careers;
- understand the organization of bureaucracies and how they can be improved.

Yet worthwhile work experiences for young persons are difficult to find. Young workers consistently are placed in the lowest-paying and least responsible positions. Employers are reluctant to trust inexperienced youth with responsible jobs and hesitate to disrupt productivity by hiring them. In too many programs youth are placed in make-work situations and isolated from the important, real-life responsibilities, thereby minimizing the potential value of the opportunity.

Effective work experiences must be carefully designed and involve more than menial or parallel work tasks. To be both valuable and satisfying the work needs to include:

- verbal instructions which clearly communicate not only the work requirements but the more subtle "rules of the game";

- positive, competent role models;
- meaningful work which offers risk, challenge and group support;
- realistic feedback on successes and failures;
- adaptation of experiences to individual differences allowing students to progress to more difficult tasks as their skill level increases.

Developing these experiences may mean redesigning present jobs, humanizing work environments and carefully planning student experiences. This will be no easy task and may be most successfully accomplished by using a network of federally sponsored training experiences to foster socialization opportunities, personal maturity and realistic career planning.

Doing so will both improve the learning environment by tying it to the activities of the larger community and benefit the student by providing opportunities to learn attitudes and skills imperative for future success.

Principal Investigator: Harry Silberman
Department of Education
University of California
at Los Angeles
405 Hilgard Avenue
Los Angeles, CA 90024

PRODUCTS AVAILABLE: Labor Market Information for Youths, Wolfbein, Seymour (ed.) Temple University, Philadelphia, 1975. "Improving Work as a Socialization System." Contact the principal investigator for availability.

Contract No.: NIE-C-74-0051 Funding: $1,500

43. INDIVIDUALIZED INSTRUCTION AND TRACKING IN CAREER EDUCATION

The concept of individualized instruction has been around since Socrates' students were urged to discover truth for themselves. How the idea works within the context of three major career education programs is the focus of this report.

The Mountain-Plains Rural Residential Program in Montana, Experience-Based Career Education at Research for Better Schools in Philadelphia, and Appalachia Educational Laboratory in Charleston, West Virginia share a common goal in assisting individual students to attain self-satisfaction and self-realization through career awareness, career exploration and career specialization. At issue for the program--and for other career education efforts as well--is whether instruction can be personalized sufficiently to help students reach their own goals while at the same time avoid "tracking students into narrowly constrained areas."

Have the three programs succeeded in individualizing instruction? Quite well, apparently. All three projects have systematic procedures for determining on a continual basis the needs, interests and aspirations of their students, and for providing options that help optimize students' growth. Backed up by strong counseling programs, students are offered a wide range of alternatives in both academic and career areas.

So how about criticism that career education may be a form of "tracking" in disguise? In none of these programs did "tracking" appear to exist. Each one used multiple strategies and instruments as a part of its assessment methods. Where a student's basic skills might have been limiting, assessment and remedial activities were continuously available. All students were apprised of all possible choices and these options were no more or less available

for special groups than for the majority. In fact, all three of these programs perceived individualizing services as the central way to avoid "tracking." What evidences of "tracking" did surface during the observations of researchers was probably due to factors beyond the control of the projects themselves--factors such as financial constraints and the underlying peer and societal influences that relate to career exploration choices.

Noting that "tracking" has both positive and negative aspects, researchers found no single, precise method for assessing the degree of student "tracking" in programs. They suggest six clues to watch for:

- the bases on which occupational training areas are selected
- the extensiveness of student diagnoses
- the nature of counseling services
- the accommodation to culturally different values
- the degree of program "fit" to client needs
- the importance placed on individual as opposed to societal needs.

Principal Investigator: Karen Kitchak
ARIES Corporation
4930 West 77th Street
Minneapolis, MN 55435

PRODUCT AVAILABLE: Individualized Instruction and Tracking in Career Education, June 1974.

Contract No.: OIC-0-72-5240 Funding: $737,587

44. ISSUES OF SEX BIAS AND SEX FAIRNESS IN CAREER INTEREST MEASUREMENT

Achieving educational and occupational equity for men and women has been a major concern of educational and governmental agencies alike. Title IX regulations prohibit the use of sex-biased materials, tests and practices in guidance and counseling. The regulations do not define what is sex fair and what is sex-biased, however. That remains a controversial matter, particularly with regard to interest inventory construction and interpretation.

Should test makers reflect a world that admittedly restricts certain occupations to certain sexes, or should they actively promote fairness by only including items that are equally available to males and females?

The book includes eleven commissioned papers which formed the technical background on which NIE's "Guidelines for Assessment of Sex Bias and Sex Fairness in Career Interest Inventories" were developed. All this is part of a number of NIE-funded activities, analyses and products intended to help develop some criteria for sex-fair career counseling tests and practices.

A second purpose was to increase sensitivity to sex bias issues so that those who help youth and adults make career decisions will be aware of all sides of the question. The papers point out the various factors which contribute to sex stereotyping--early socialization, parents' attitudes, teachers' attitudes, school curriculum, the media, counselors' own biases and overall societal attitudes. Collectively, the papers provide a good overview of the problems and costs to be faced in developing sex-fair materials.

As supplementary reading for pre-service and inservice counselor training, as a reference tool

for testers and test developers and as a text for graduate-level measurement courses, this book is a must.

Principal Investigator: Esther Diamond
Science Research Associates
259 East Erie Street
Chicago, IL 60611

PRODUCT AVAILABLE: Issues of Sex Bias and Sex Fairness in Career Interest Measurement, 1975. Available from NIE.

Contract Nos.: NIE-C-74-0101 Funding: $47,099
NIE-C-00-3-0060

45. LEARNING KIT FOR GUIDANCE COUNSELORS AND COUNSELOR EDUCATORS TO AID IN THE DELIVERY OF SEX-FAIR COUNSELING

Now that legislation has paved the way for equal opportunity for women and men, counselors must share responsibility for making the laws work. Nowhere is this more crucial than in career guidance.

Abt Associates, Inc. has prepared Sex Fairness in Career Guidance: A Learning Kit to help staff become sensitized to sex bias and learn to eliminate it in career guidance activities with students. The multi-media package can be used for teacher or counselor inservice training or may be self-administered. Since one must be aware of something in order to combat it, Chapter One introduces the "dual role system which limits career and other life choices for both men and women in our society."

Traditional family and work roles for both sexes are discussed. Chapter Two sets out a sex-fair guidance program, recommending specific activities and materials counselors can use to help persons examine attitudes and values with respect to sexual stereotypes and how those influence career options. Group and individual counseling sessions are suggested as well as supplemental resource materials.

Since sex bias in career interest inventories is hard to recognize, Chapter Three trains counselors to identify and combat it in administering, reporting and interpreting interest measurements. This section also interprets NIE's guidelines for assessing career interest inventories. An annotated listing and resource guide comprises Chapter Four. Agencies and organizations which can help counselors on the firing line are identified. Scenario cards for role playing, a tape cassette of simulated counseling situations, spirit masters for use with clients and transcripts of counselor-client interactions round out this valuable kit.

School counselors, adult educators and private industry personnel people will find this kit useful on a day-to-day basis. It is available from Abt Associates, Inc.

Principal Investigator: Patricia Cook
Abt Associates, Inc.
55 Wheeler Street
Cambridge, MA 02138

PRODUCTS AVAILABLE: Sex Fairness in Career Guidance kit. Contact Abt Associates for availability.

Contract No.: NIE-C-74-0141 Funding: $63,843

46. LEARNING RESOURCE ACTIVITIES: A TEACHER'S GUIDE

Most busy teachers look for practical, effective classroom activity guides they can get their teeth into. It is precisely the kind of teaching aid they'll find in this three-volume set.

Each guide outlines lesson plans which incorporate career education concepts while such subjects as mathematics, social studies, English, science, health and the arts are being taught. The plans tie in the "Occupational Focus" with the "English Relevance," for example, and specify objectives for students. Materials needed, suggested reading lists and discussions of issues which can be raised during the class activity are identified, but they serve as guidelines--not the rigid, inflexible programs that frequently "turn off" creative teachers.

Another feature of this publication is the way in which the use of free and inexpensive materials and community resources is blended with in-school projects. Resource lists identify companies, trade associations and professional societies which can provide supplemental materials and information. These all enchance the hands-on approach suggested here.

Since most activities included grew out of local career education efforts, the guides have a "teacher sharing with teachers" flavor which results in a down-to-earth style, easy-to-use format, and usually no extra purchases are required to carry out the plans.

These volumes are now available from Abt Associates, Inc. who solicit teachers' comments about the value of the guides.

Principal Investigator: Peter Finn
Abt Associates, Inc.
55 Wheeler Street
Cambridge, MA 02138

PRODUCT AVAILABLE: Career Education Activities for Subject Area Teachers (Grades 1-6, 6-9, 9-12). Contact the principal investigator for further information.

Contract No.: NIE-C-74-0129 Funding: $56,898

47. LEGAL CONSTRAINTS TO EXTERNAL HIGHER EDUCATION DEGREE PROGRAM

When college reformers propose changes such as granting credit for self-taught skills and wisdom acquired through experience, quality control may be at stake.

This project identifies the legal and regulatory issues created by the rapid growth of nontraditional studies and external degree programs. It recommends alternatives which would support experimentation and growth while assuring quality and legitimacy.

The authors describe what is happening to traditional institutions of higher education as a basis for understanding the external degree movement. They argue that the external degree movement is not merely an extension of earlier adult education efforts, but that it represents deep dissatisfaction with present day higher education, which foreshadows fundamental changes in the delivery of higher education in the future.

Their discussion provides information on both governmental and private accreditation's responses to nontraditional studies and an analysis of the constitutional issues which such responses may raise. An analysis of existing chartering and licensing laws in postsecondary education is also included.

Principal Investigator: William Kaplan
Columbia School of Law
Catholic University of America
Washington, D.C. 20017

PRODUCT AVAILABLE: Legal and Other Constraints to the Development of External Degree Programs,

2 volumes. Available from ERIC (#HE006323).

Contract No.: NE-G-00-3-0208 Funding: $38,390

48. LEGAL ISSUES IN EXPERIENCE-BASED CAREER EDUCATION

Will legal headaches face new EBCE programs as they sprout up across the country? Probably nothing major, says this study, but securing good legal counsel at the onset is recommended.

One consideration for new programs is whether to incorporate as a private school. Although doing so has numerous advantages--greater flexibility in staff selection, broader curriculum options--it has at least one drawback. Long-term funding possibilities are bleak, with little chance of securing state educational support for the private sector's efforts. Thus public school sponsorship of career education programs still looks like the best way.

Choosing public school sponsorship means facing other issues, however, such as state teacher certification requirements, curriculum standards and attendance regulations. Consideration needs to be given to each of these issues and alternatives found that meet respective state guidelines. Teacher certification surfaces as particularly important. Without having staff either certified or capable of being certified, the respectability of the EBCE program may well be placed in jeopardy.

All work-experience programs face an insurance problem. Both students and employers need protection guarantees against injury and harm. Most of the original EBCE programs purchased additional insurance coverage for students, usually at minimal cost, and incorporated a "hold harmless" clause for the benefit of the employer.

Transportation alternatives also needed to be provided by EBCE programs. Most solved it by purchasing bus passes for students or providing staff-driven vehicles to transport students to employer sites.

Finally, all programs have to deal with maintaining the student in a learner rather than an employee status. In all instances this meant that all work performed at the employer site was done without pay.

So legal considerations do exist for the new EBCE program. Most are fairly easily resolved, but if they are ignored, directors may see minor headaches turn to migraines.

Principal Investigator: ARIES Corporation
4930 West 77th Street
Minneapolis, MN 55435

PRODUCT AVAILABLE: Legal Issues in Experience-Based Career Education. Contact ARIES for availability.

Contract No.: OEC-0-72-5240 Funding: $737,587

49. MAKING A CHOICE: UNDERSTANDING CAREER DECISION MAKING

"What do you want to be when you grow up?" For a five-year old that's easy--"I wanna be a police officer." After childhood, choosing a career can be a lot harder and seem like a confusing, risky business.

Many careers are found accidentally--because of a persons' own abilities, chance remarks by friends, successful or unsuccessful learning experiences, good or bad work habits. But, says the American Institute for Research, people can learn to control and shape the forces that affect their career choices.

In an effort to understand more about career decision making, the AIR study proposes a new social learning theory. Simply stated, it points out the crucial importance of positive and negative reinforcement on an individual's occupational and educational preferences, and notes, in part, the significance of:

- student involvement in work activities where adults holding that job provide positive reinforcement;
- encouragement by family, peers and educators for involvement in occupational activities;
- access to valued adult models working in certain occupations
- hearing positive or negative words related to given careers.

Another purpose of this study was to decide the kind of intervention programs that can make a difference in career decision making. A search of the literature and a critical review by experts in

psychology, sociology, economics, guidance and education yielded the following recommendations:

- Achieve a better balance between the number of trained workers in each occupation and the number of job opportunities, and use incentives such as scholarships to encourage students to enter promising career fields.

- Make future employment projections really available and useable through media presentations, skill-development programs, games and simulations.

- Help adults and youth become skilled career decision makers by developing programs in which they can learn and practice effective decision-making skills.

- Provide information and experiences that help students really know what careers "feel" like and help them overcome limited aspirations.

In addition, the study points out a number of areas in which further research is needed to find out how young people can be exposed to more career alternatives and how they can receive more decision-making help in school:

- If people are attracted to careers that they associate with positive reinforcement, how can learning be structured so that students--particularly women and minorities--experience such reinforcement?

- How do parents, friends and relatives influence career decisions?

- What environmental factors affect a person's career choices and which of those factors can be controlled to the benefit of the individual?

- Do laws, licensing practices and union rules prevent some people from preparing for certain careers?

- Is training and job information inadequate? What can be done about this?

- Do schools limit career options unnecessarily through tracking, counseling and testing practices?

- How can students be exposed to a number of career decision-making patterns so that they can choose those that fit their own particular styles? What factors ensure job satisfaction and success and how can this information be put to good use?

The study advocates research on all of these questions. In addition, it suggests that NIE establish a clearinghouse where information about career decision making can be stored and disseminated to practitioners across the country.

Principal Investigator: Anita Mitchell
American Institutes for Research
P.O. Box 1113
Palo Alto, CA 94302

PRODUCTS AVAILABLE: A Social Learning Theory of Career Decision Making (Final Report in ERIC). "Applications of a Social Learning Theory of Career Selection." Focus on Guidance, November 1975. Counseling Psychologist, Vol. 6, No. 3.

Contract No.: NIE-C-74-0134 Funding: $136,700

50. MANAGEMENT INFORMATION SYSTEM FOR VOCATIONAL EDUCATION

With millions of dollars flowing into vocational programs yearly, how do planners know they're meeting the right needs at the right time and in the right place?

State and local vocational education agencies want up-to-date information daily. A system now being tested in the state of Colorado will help vocational administrators define these needs, update existing files and use that information easily. Using computer technology the agency already has, the system can be tied smoothly with other educational management information. Information a planning staff might need includes:

- staff data--credentials, years of experience, salaries
- program data--student characteristics, courses offered
- equipment and materials data--needs and costs
- facilities data--location and amount of use
- financial data--current costs, sources
- occupational demand data--Labor Department surveys

How-to-do-it software materials are currently under refinement.

Principal Investigator: Center for Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, OH 43210

PRODUCTS AVAILABLE: System materials available after August 1976 include five user documents: load, edit and update computer programs; and field-trial assessment results. Associated publications already available include: Information Needs of State Directors of Vocational Education (1972); Information Needs of Local Administrators of Vocational Education (1972); Information Utilization by Vocational Educators, Utilization, Manpower and Follow-up Data: A Perspective for Local Vocational Education Planning (1973); Manpower Demand: Information Guidelines for Educational Vocational Education and Manpower Planning (1973); Linear Programming for Vocational Education Planning (1973 interim report); and A Manual for Conducting Follow-up Surveys of Former Vocational Students (1975). Contact the developer for availability.

Contract No.: NE-C-00-3-0076 Funding: $901,618

51. MANPOWER DATA AND VOCATIONAL EDUCATION

Labor market information is seldom used and usually distrusted in planning vocational education programs. Most training programs are born out of teacher interest, student requests, employer surveys, reviews of local want ads or other "hunches" about what should be offered to whom.

According to a 10-state survey by the Center for Occupational Education, local school districts and community colleges generally are not required to use data from the Federal Bureau of Labor Statistics or other sources to justify starting new programs or phasing out old ones. However, these data are often fed into state-level planning efforts.

Instead, local administrators trust their own advisory groups and local surveys a lot more than Labor Department reports--which are often "too complex to understand anyway." Educators tend to feel government data emphasize national and statewide trends rather than local needs.

Yet since today's workforce is highly mobile and requires specific as well as generalizable skills of its members, how should this information exchange occur? Even though student and staff interests should be given consideration, programs that do not reflect present or future labor market needs and that provide students with nonmarketable skills seem inexcusable.

To improve both the source and the use of labor force needs, the report recommends many changes:

- Establish an information coordinating committee made up of the U.S. Commissioner of Education, Commissioner of Labor

Statistics and Assistance Secretary of Labor for Manpower to develop a comprehensive labor market information system useable by the general public, schools and governmental agencies;

- Identify, via the U.S. Office of Education, exemplary vocational education enrollment project systems and develop standardized definitions for use in data reporting;
- Implement standardized student followup procedures;
- Emphasize in Bureau of Labor statistics reports more local labor market data using an informal, narrative style;
- Identify exemplary practices among state and local vocational education agencies and get the information on good programs out to interested agencies;
- Develop a better dissemination procedure between the Department of Labor and educators and increase the dialogue between statistical experts and data users;
- Develop training packages to assist vocational educators in making manpower material useable.

The message: If existing manpower data are to impact on the planning of local and state vocational education programs, changes must be made. Otherwise manpower data will continue to gather dust on vocational educators' bookshelves.

Principal Investigator: D.W. Drewes,
Douglas S. Katz
Center for Occupational Education
North Carolina State University
Raleigh, NC 27607

PRODUCT AVAILABLE: Manpower Data and Vocational Education: A National Study of Availability and Use. Available from the Center for Occupational Education.

Contract No.: NE-C-00-3-0069 Funding: $639,372

52. METHODS OF CURRICULUM CONTENT DERIVATION

Skills vocational students need are often better learned on-the-job and not in schools, but finding out which should be taught where is seldom easy.

Jobs today are so complex and specialized that preparation programs must focus on skills that are clearly needed in that job. Guidelines are being developed in this project to help curriculum writers identify the content that is better learned in classrooms and laboratories than in the workplace.

Vocational programs should avoid teaching skills that:

- most students probably have already;
- could be better taught on the job;
- may require extensive job experience to master;
- differ from job situation to situation so much that no standard approach is possible;
- are needed only after site experience is obtained so that early skill acquisition might be forgotten.

Using a "task inventory" approach, the basic procedure is to separate the skills that are critical from those that are merely "nice to know." The assumption is that the people who are in the best position to report that information are those who perform and supervise the performance of those tasks--not outside consultants or library books.

User manuals developed by the project will cover the following topics:

- introduction to procedures
- how to write job task statements
- how to identify relevant job performance criteria
- how to derive performance requirements for training
- computer programs and technical information for processing survey data.

Principal Investigator: Center for Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, OH 43210

PRODUCTS AVAILABLE: Automotive Mechanics Occupational Performance Survey, Interim Report, 1973; Methodology to Assess the Content and Strategies of Affective and Descriptive Meaning Associated with the World of Work Environment, 1974; Procedures for Constructing and Using Task Inventories, 1973; Rating the Job Significance of Technical Concepts: An Application to Three Occupations, 1974; RCMAT: A Computer Program to Calculate a Measure of Associative Verbal Relatedness, 1975; Secretarial Science Occupational Survey, 1973; Occupational Survey Report of Business Data Programmers: Task Data from Workers and Supervisors Indicating Job Relevance and Training Criticalness, 1975; Occupational Survey Report on General Secretaries: Task Data from Workers and Supervisors Indicating Job Relevance and Training Criticalness, 1975; Occupational Survey Report on Automotive Mechanics: Task Data from Workers and

Supervisors Indicating Job Relevance and Training Criticalness, 1975; Business Data Processing Occupational Performance Survey, Interim Report, 1973. Contact the developer for availability.

Contract No.: NE-C-00-3-0078 Funding: $1,196,124

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53. MONOGRAPH ON THE MOUNTAIN-PLAINS EXPERIENCE

While some people are debating whether a "systems approach" to delivering human services such as education and economic development will work, the Mountain-Plains program is proving it can. That's the opinion, at least, of five education and social science experts asked by NIE to look at the program and compare it with what they know about similar efforts.

Some features these reviewers liked were:

- Clearly-specified objectives are used to guide every aspect of the program--from curriculum to eventual placement.
- Shared decision making is promoted at all levels even though leadership is strong and centralized.
- The definition of "disadvantaged persons" includes poverty level, physical abilities, cultural background and personal and family adjustment needs.
- Students are judged on their actual performance as well as on standardized tests.
- Program evaluation strategies are flexible enough to assess almost all of what is happening.
- Placement and followup services are given as much attention as selection and preparation services.
- Close intergovernmental cooperation is essential.

What features of the Mountain-Plains model should potential adopters consider carefully?

- It takes a lot of staff time to work with individual family members.
- Students seem encouraged to "lock in" on an occupational choice early rather than exploring a variety of options as is typical in career education for adolescents.
- The program will not be a cure-all for every family's problems; considerable responsibility and self-initiatives are still required.
- Careful management is essential when there are so many human needs being served.
- Mountain-Plains' location and site are not typical even though any state could probably find appropriate facilities for housing such a program.

Perhaps the reason why Mountain-Plains' approach to career education for rural, disadvantaged families has proven feasible is that so much was borrowed from other tried and true programs:

- Health care and community child care are common features in established poverty/ rehabilitation-type programs.
- Attention to basic skills is enjoying a resurgence at the secondary school level.
- Occupational preparation programs are improving all the time thanks to innovative efforts by vocational educators.
- Personal counseling as practiced at Mountain-Plains has been developed at many colleges and universities.

- Individually-tailored study programs (including private study space) are usually features of university graduate education.

Specialists who contributed their insights in this monograph were Steve Zifferblat, Stanford University (curriculum and instruction); Daniel Stufflebeam, Western Michigan University (guidance and counseling); Louis Kishkunas, Superintendent of Denver, Colorado Public Schools (occupational preparation); and Robert Darcy, Colorado State University (recruitment, selection, placement and followup).

Principal Investigators: See above

PRODUCT AVAILABLE: The Mountain-Plains Experience: Lessons from a Resident Career Education Center for Rural Multi-Problem Families. Contact NIE for status.

Contract No.: NIE-C-74-0063, 64, 65, 66, 67

Total Funding: $49,045.21

54. NATIONAL CAREER EDUCATION FORUMS

Invite local school people interested in career education to meet with researchers, developers and policymakers for three days and something good is bound to happen for all. At least the over 1000 persons attending NIE's 1975 and 1976 national forums on career education would agree that a nationwide view of ideas for immediate action and long-range planning was offered.

Held as a way for the Institute to hear about needs from the field, participants also got a firsthand look at research and development efforts designed to address their problems.

The first Forum, held in March 1975 at the Center for Vocational Education in Columbus, Ohio, featured papers on curriculum, guidance, work experience and placement which were later bound into a booklet titled Models of Career Education Programs. Another set of papers on implementation issues by local, state and federal career educators became a volume titled Planning and Implementing Career Education Programs: Perspectives. Yet a third volume that emerged from the first NIE Forum is titled Career Education 1975: A Contemporary Sampler. The latter is an idea book resource manual--a candid snapshot review--of 15 projects and what they've accomplished so far. Vignettes in this volume range from how the National Exploring Division of the Boy Scouts of America developed a unique career exploration program for young men and women ages 14-21 to a preview of the NIE-sponsored learning kit titled "Sex Fairness in Career Guidance."

The February 1976 Career Education Forum, held in Washington, D.C., used as its theme "School to Work--Work to School." Format resembled a major convention complete with keynote speakers, small group seminars, film showing and exhibits.

Reprints of presentations made by the following national leaders in career education are available as separate monographs:

- Grant Venn, Seeking an Administrative Commitment to Innovation
- Albert Quie, Education and Work: A Congressional Perspective
- Gene Bottoms, Fusing the Career Education Concept into the Fibre of the State Educational System
- William Pierce, Lifelong Education
- Harry Silberman, Systematic Issues in School to Work Transition
- Kenneth Komoski, Instructional Materials: Litmus Test of Career Education
- Harold Hodgkinson, A Research Agenda for the National Institute of Education
- Ken Hoyt, Setting the Record Straight: A Reply to Grubb and Lazerson

The 1977 Forum is scheduled for February 2-4 in San Francisco.

Principal Investigator: Arthur Terry
Center for Vocational Education
The Ohio State University
1970 Kenny Road
Columbus, OH 43210

PRODUCTS AVAILABLE: Contact the Center for copies of 1975 and 1976 Forum publications.

Contract No.: OEG-0-72-1419 Funding: Continuing

55. NEW MODEL FOR YOUTH LEARNING AND SOCIALIZATION

Today's youth probably are as different as they seem. The routes from adolescence to adulthood have seen dramatic changes since the turn of the century.

Statistics cited in this study say that these changes are related to the symptoms of growing youth alienation--alienation which is most intense among upper middle-class youth.

What's at the root of the problem? Wynne says schools may be failing to teach young people the interactive skills and personal attitudes which make for smooth entry into society. Middle-class youth in particular are relieved of responsibilities which teach them affective skills (working their way through school, caring for brothers and sisters, etc.). The growing influence of school has been tied to a dramatic decrease in time spent in paid or unpaid employment. There are signs, according to this study, that schooling just isn't all that effective in preparing young people for the real world that awaits them.

Is there a solution? The suggestion here is that one means of increasing affective learning and decreasing youth alienation is to expand the amount and variety of work experience available to youth. The authors propose the development of a particularly structured management internship system that views work as an environment which 1) cuts across age lines, 2) forces employees to relate to many persons, styles and age lines and 3) enables employees to produce goods or services felt to be relevant to purchasers. By design this system would provide a variety of incentives to foster learning and commitment to learning and teaching on the part of both interns and their employer-mentors.

Ultimately, implementation of the program could be financed and operated much as state and community colleges are supported, although interns would not earn degrees. Instead, interns would acquire skills needed to hold postgraduate positions. Equally important, interns would have better understandings of how their work fits into the fabric of adult society.

The researchers note that facts about credentialism and advancement without a degree are mixed. There are career routes to college-level jobs still open to youths with high initiative and strong affective skills. But there's a growing tendency to question the talents and judgment of non-college job applicants who don't hold sheepskins but do hold high career aspirations.

The authors say that if these attitudes persist, there will be an increased correlation between possessing a college degree and higher earning--not because college will become more relevant to work, but because top-notch high school graduates will feel compelled to go to college to assure good job prospects. This "self-fulfilling prophecy" may result in more alienation than society can bear.

Principal Investigator: Edward Wynne
College of Education
University of Illinois
at Chicago Circle
Chicago, IL 60680

PRODUCT AVAILABLE: Management Internships: A New System for Youth Socialization and Learning. Contact the principal investigator for availability.

Contract No.: NE-G-00-3-0219 Funding: $20,000

56. OCCUPATIONAL EXPLORATION PROGRAM

Getting serious about a job in the 7th and 8th grade is probably too soon. But the fact is, junior high-aged students are eager to try on career roles for size. And they prefer to use games and easy-to-read, action-packed materials in the process.

To capture this natural energy and channel it creatively, classroom materials that will fit almost any subject area at the middle school level have been developed.

The hope is that young people will keep all their options open. In the process they should understand themselves better, see how academic skills are applied in the real world, get a feel for work responsibilities and learn how to investigate career choices.

Teachers call the shots in using the activities. Each simulation involves 6-10 students in sessions lasting 1-3 days each. Games, booklets, cassettes and other audiovisual devices are provided--some for independent student use as well. Real problems requiring real solutions are simulated--like taking on the roles of educators in school year 2085 to understand the kinds of jobs and responsibilities that educators tomorrow may face.

Packages are developed or underway in the eight clusters. Units and sample jobs associated with each follow.

The Arts Cluster Package: scene designer, costume designer, free lance writer, recording engineer, band director, gallery director.

Construction and Manufacturing Cluster Package: carpenter, plumber, plasterer, architect, contractor, concrete mason, construction worker

(this package must be implemented only in industrial arts classes because of safety and tool requirements.

Education Cluster Package: animal trainer, admissions officer, apprentice, film librarian, test developer, teacher's aide, superintendent.

Health and Welfare Cluster Package: inhalation therapist, dietician, lawyer, security guard, sanitarian, case worker.

Trade and Finance Cluster Package: insurance agent, truck driver, cashier, bank teller, title searcher, salesperson, investment counselor.

Transportation Cluster Package: air freight expediter, taxi driver, mail carrier, traffic control engineer, travel agent, estimator.

Natural Resources Cluster Package: (in process)

Communications Cluster Package: (in process)

Principal Investigator: Norman Singer
Center for Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, OH 43210

PRODUCTS AVAILABLE: the eight packages listed above all of which are now being reviewed by potential publishers. Contact the Center for status.

Contract No.: NIE-C-00-4-0012 Funding: $1,116,727

57. PERFORMANCE-BASED VOCATIONAL TEACHER EDUCATION

Efforts to improve the preparation and inservice development of vocational teachers in the early 1970's coincided with national interest in performance-based teacher education. A nationwide survey identified 384 skills required in successful vocational teaching, which were then shaped into 100 modules now being field tested at institutions of higher education in several states and one Canadian province. The program can be used for training teachers in any of the standard secondary and postsecondary vocational disciplines--agriculture, business and office education, distributive education, health occupations, home economics, technical and trade and industrial education.

As in other performance-based teacher education programs, certain essential characteristics stand out in this project:

- Competencies are stated as skills that can be demonstrated.
- Criteria for assessing the competencies are specified at the outset.
- Students are asked to self-evaluate continuously.
- Evidence of success is based on actual teaching performance.
- Rate of progress is not timebound.
- Instruction is individualized and personalized.
- Feedback is sought and given at every step.

- The process is systematized with a definite sequence of activities.
- Emphasis is on outcomes, not prerequisites, and credit for skills acquired earlier is given.
- Instruction is modularized.
- Students are held accountable for their own performance.

The Performance-Based Vocational Teacher Education (PBVTE), developed by the Center for Vocational Education (CVE), calls for the candidate to work with a resource person--e.g., professor--on acquisition of competencies in the following domains: Program Planning, Development and Evaluation (11 modules), Instructional Planning (6), Instructional Execution (29), Instructional Evaluation (6), Instructional Management (9), Guidance (5), School-Community Relations (10), Student Vocational Organizations (6), Professional Role and Development (8), Coordination (10).

Students are always required to demonstrate skills in actual school situations with options for simulation provided in advance. Supplementary reading and learning activities are provided or suggested in each module. A resource center is recommended where students can work on certain activities together and have access to support materials and media. Options are suggested for use of community resources, too--such as testing oral presentation skills with a 4-H group or in an evening adult education course.

The amount of academic credit to be given is a local option. Student time required to complete each module ranges from five to thirty hours.

Anticipated products funded by NIE include the 100 modules with a master list of competencies, a resource person guide, a student guide and an overview slide-tape. Other products of a related nature are being developed under separate USOE contracts.

Principal Investigator: Center for Vocational Education
The Ohio State University
1960 Kenny Road
Columbis, OH 43210

PRODUCTS AVAILABLE: Contact the Center for listing of available materials above.

Contract No.: NE-C-00-3-0077 Funding: $1,679,638

58. PERFORMANCE CONSEQUENCES OF SEX BIAS IN THE CONTENT OF MAJOR ACHIEVEMENT TEST BATTERIES

Do words like "man," "boy," "he," and "him" in an achievement test have negative effects on the performance of girls taking the test? Do boys react differently to test items referring to sex-related roles like "knights in battle" versus "nurses caring for children?"

Differences in performance may occur when undue reference to one sex or the other appears in test items. To check this out, the Educational Testing Service has begun a project to analyze sex bias in test content and its impact on student performance.

The project now in progress will review the content of several major test batteries used at a variety of grade levels. The frequency with which males or females are referred to will be related to the differences in performance between boys and girls on those respective items.

If a relationship between sex bias in text content and student performance is confirmed, some changes may be needed in words used by test writers--all of which could affect the future placement of students, the kind of educational and occupational counseling students receive, and ultimately the lifelong options available to both young men and women.

Principal Investigator: Thomas F. Donlon
Marlaine Lockhead-Katz
Educational Testing Service
Rosdale Road
Princeton, NJ 08540

PRODUCT AVAILABLE: Study still in progress. Contact authors for status.

Contract No.: NIE-G-74-0008 Funding: $60,000

59. A POLICY STUDY IN EDUCATION AND WORK: JOB SATISFACTION

The old axiom that getting more education means getting more satisfying jobs may not be as true as most people think. University of Michigan researchers who analyzed 16 studies and nine national surveys concluded that education has little direct effect on job satisfaction, but education helps workers get "generally better"--hence more satisfying--jobs, an indirect effect.

Other thought-provoking points are:

- The more dissatisfied of all were those workers too highly educated for their jobs.
- "There is clearly no increment in job satisfaction with each succeeding year of education."
- People with more years of education look for more challenge and self-development opportunities in their jobs.
- All surveys except one indicated there was no payoff from high school or college training unless a diploma is earned--the "credentials effect."

What should be done?

- Employers and educators alike should pay more attention to the occupational needs of "overeducated" and "undereducated" persons. It's sad but true that while many people lack the skills they need for available jobs, others have know-how they'll never use. Employers should re-examine the educational requirements they set for jobs. Job entry should be based on skills acquired

rather than diplomas secured. Jobs should be redesigned to take account of the increasing education level of America's labor force and accommodate the importance better-educated workers attach to jobs that challenge them and improve their skills.

- K-12 educators should put less emphasis on career-specific skills and more on generalizable skills useful from job to job. Educators should stretch the unwritten contract between the student and the educational system to make it open-ended and good for a lifetime of training and retraining when the individual needs it.

- Educators should stop saying schoolwork is essential for enjoying a good job later on. "In terms of job satisfaction, the occupational payoffs of education are quite small," says this study. "To promise otherwise will lead to a disillusioned labor force."

Principal Investigator: Robert P. Quinn
The University of Michigan
Ann Arbor, Michigan 48104

PRODUCT AVAILABLE: NIE Papers in Education and Work: No. 5: Education and Job Satisfaction: A Questionable Payoff. Contact NIE for availability.

Contract No.: NIE-C-74-0136 Funding: $35,462

60. A POLICY STUDY IN EDUCATION AND WORK: UNDEREMPLOYMENT

Telling young people that it's important to get a college education is becoming as passe as pleated skirts and hula hoops. Should it?

With all the publicity about the trouble college graduates are having getting "good" jobs, this study takes a closer look at the reasons why many people are calling our population overeducated or underemployed--i.e., overqualified for the jobs they are able to get.

Startlingly, they found that most people, including employers, are using the years of education completed as a measure of one's ability to do a job. At the same time, they are saying that a job requires attainment at least equal to--and increasingly, surpassing--that of the people now doing the job.

The study seriously questions how good these recommendations are and the wisdom of the advice that students are given. At this time, unfortunately, counselors, researchers, public officials and parents do not have alternative ways of establishing job requirements based on skill competencies as well as educational achievements.

To improve the advice we give young people, the study suggests several activities:

- Trace the mobility of workers between occupations and use this knowledge to identify the most flexible types of skills and education.

- Improve manpower forecasting--concentrating on the real educational and skill requirements of jobs--and get the information to the people

who need it through an improved employment service and better cooperation between manpower planners and educators.

- Study the ways formal education, ability and on-the-job training really relate to careers.

- Provide high-quality part-time work so that people who cannot work full-time do not gradually lose their job skills.

Principal Investigators: Gerald P. Glyde
David L. Snyder
Antony R. Sternberger
Institute for Research on Human Resources
Pennsylvania State University
University Park, PA 16802

PRODUCT AVAILABLE: Underemployment: Definition, Courses, and Measurement (final report). Contact the authors for availability. Also available from ERIC (#ED107862).

Contract No.: NIE-C-74-0137 Funding: $32,521

61. RECOMMENDATIONS TO ACHIEVE OCCUPATIONAL AND EDUCATIONAL EQUITY FOR WOMEN IN SCHOOL DISTRICTS

Where are the women principals and superintendents in our elementary and high schools? If New York State is representative of the rest of the country, women educators aren't visible because they aren't being hired.

In fact, the situation for women educators is getting worse instead of better. Women principals in New York State have declined by over 50 percent in the past 16 years; outside New York City only 14 percent of the elementary schools and less than 1 percent of the high schools have women principals.

These statistics have grave implications for students, says this report. Few students are having a chance to view women as leaders. Without these role models, the system provides little encouragement for young women to be anything but teachers and secretaries.

For women seeking administrative posts, the statistics are equally serious. Women administrators can't find jobs. To combat this the Long Island Council for Women Administrators in Education organized a "grassroots" process to change discriminatory hiring practices. The Council's aim--to provide qualified women with equal opportunities in educational administration--included this plan of attack:

- Disrupt the "buddy system" of hiring by developing a communication system of monitors in each district who report administrative vacancies to Council headquarters. Potential women candidates are then immediately contacted and urged to apply.

- Record district recruitment and selection practices and issue reports such as "Practices Which Prevent Women From Securing Administrative Positions."

- Offer career development programs for encouraging upward mobility.

- Inform school administrators through direct contact and research studies of discrimination in their district and request their cooperation in announcing vacancies to women applicants and interviewing and hiring women as administrators.

Have these tactics been successful? Although it is too soon to see a sudden increase in women administrators, there have been some successes. Qualified women are now receiving notice of 50 percent more job openings through the Council's network. Many more women are being interviewed for openings than ever before. Administrators, aware that their policies are being monitored, are more attentive to compliance regulations. And women have learned that teamwork on the "grassroots" level works in combating subtle discrimination in hiring practices.

But more remains to be done, states the Council. Some teeth need to be put into present and federal compliance mechanisms. Districts have to be made accountable for discrimination against women in administration. Less talk and more action is called for if employment equity for women in education will ever be more than a promise.

Principal Investigator: Doris Timpano
Career Women in Education
65 Central Park Road
Plainview, NY 11803

PRODUCT AVAILABLE: NIE Papers in Education and Work: No. 4: Sex Discrimination in the Selection of School District Administrators. Contact NIE for availability.

Contract No.: NIE-P-76-000. Funding: $2,000

62. RECURRENT EDUCATION

Great-grandfather may have thought school was a waste of time when there were cows to be milked and fields to plow. But what are his sons and granddaughters doing today? Taking classes in Organic Gardening and Employee Negotiations in continuing education programs.

The papers included in this volume derived from a 1973 international conference on recurrent education, defined as a system starting at the completion of formal compulsory schooling and continuing throughout the remainder of a person's active life.

Regarded by many as one of the most important alternative educational approaches in recent times, recurrent education would make it possible to alternate between leisure, work and education in a way that avoids the lock-step structure of educational systems in most nations.

Is there something U.S. educators can glean from these international experiences? Of particular interest to career educators in the discussion of whether the gap between schooling and the real needs of individuals and society has not reached a point where school and other forms of learning have to become more interconnected. Credentialism must not be allowed to block the paths to upward mobility through job opportunity. Many of the contributors see recurrent education as the best way to connect an individual's career, the educational system and the economic system. Access to continuing education should be an indispensable individual right in a modern democratic society.

What might happen if recurrent education were available to all? Perhaps an improvement in economic, educational and social equality. Perhaps

greater economic productivity as the result of improved job skills and better decision-making ability.

Questions on implementation are still needing answers: How can continuing education be scheduled at the most convenient times? Where will it be conducted? How will "students" be selected? Will they want it in the first place? Who's going to pay for it? Who will teach?

Principal Investigator: Selma J. Mushkin
Public Services Laboratory
Georgetown University
Washington, D.C. 20057

PRODUCT AVAILABLE: Recurrent Education (1974). Available from NIE.

Contract No.: NE-C-00-4-0002 Funding: $15,889

63. RESIDENTIAL CAREER EDUCATION PROGRAM FOR DISADVANTAGED FAMILIES

Most career education efforts focus on one person and particular school or career needs. To see how career education can meet many life needs for an entire family, look at the Mountain-Plains program now in its fifth year of operation near Glasgow, Montana.

Some 200 families at a time actually pick themselves up and start anew, with plenty of help from a staff and program that cater to each person's unique needs, interests and competencies.

Leaving their homes in Idaho, Montana, North Dakota, South Dakota, Nebraska and Wyoming for an average eight-month stay at a remote, inactive Air Force base, families learn to overcome the social, educational and personal handicaps that have kept them unemployed or underemployed. Job skill training and career guidance are available to adults, while the whole family participates in counseling, recreation and general educational development. School-age children attend the base elementary school or are bused to secondary schools in Glasgow. Child care is provided when both parents are involved in program activities.

By renting and caring for their duplex-style housing, joining in neighborhood gatherings, participating in student government and using medical and other services, families learn to be wise consumers and good citizens. Home management, health, consumer education, parenting, community participation and leisure time skills must be demonstrated prior to completion. This open-entry/open-exit system demands initiative from each adult, who must plan his or her own instructional program and counseling cycle.

Three families apply for every one accepted. The typical adult is 26 years of age and an 11th grade dropout who reads and computes at the 8th grade level. Previous vocational training is minimal. Entering families are generally at or below the poverty level.

Applicants make first contact with coordinators in their home state. Moving allowances are provided and a weekly stipend is later paid on the basis of class attendance, much like an hourly wage. When program completion requirements are met, families select a place of residence--seldom their former home--within the six-state region, and interviews are arranged for the head of household. Relocation expenses are covered by Mountain-Plains, and families receive help in finding housing. Local state coordinators follow up to make sure families adjust to their new situations.

Occupational training--the primary emphasis at Mountain-Plains--covers entry-level skills in some 40 jobs for which employment opportunities throughout the six-state region are good. Several hundred individually-paced study units and 2,700 Learning Activity Packages are available in four broad clusters: Building Trades and Services, Automotive and Small Engines, Tourism and Marketing, and Office Education. If students need help in basic skills like reading and math, Foundation Education is available. Students also learn how to find a job, write a resume and handle an interview.

Preliminary results are noteworthy: About 75 percent of all students complete the program, and of those, over 80 percent are on the job within a month. Three weeks after exit, the average income gain for heads of households is $206 per month. Tests show strong gains in such attributes as acceptance of self and others, personal judgment and ability to focus on the task at hand. Employers say they're very satisfied, too.

As with any complex social program, there were developmental problems: Difficulty in recruiting a top-notch staff, the challenge of building a family-centered curriculum from the ground up, the frustration of managing an incredibly complex recordkeeping system and problems in adjusting to a harsh climate, extreme geographic isolation and the bureaucratic complexities of a military facility.

Yet, even with an average cost of about $14,000 for a family of 3.5 members, early returns show the payoff in terms of personal growth, life skills and job success is impressive. One independent study of preliminary data shows it takes only 5.4 years for families to pay back the government's investment, thanks to the earning power Mountain-Plains graduates enjoy. Equally important--though more difficult to measure--is each graduate's expressed satisfaction with a new life style.

Principal Investigator: Mountain-Plans Family Education and Employment Program, Inc.
Glasgow AFB, MT 59231

PRODUCTS AVAILABLE: Contact Mountain-Plains for the status of reports now in preparation.

Contract No.: NE-C-00-3-0298 Funding: $12,498,959

64. THE ROLE OF EDUCATION IN SOCIOECONOMIC ACHIEVEMENT: A COMPARATIVE STUDY

Is the desire for jobs that pay big in terms of money, security and prestige common to all post-industrial democracies? The answer may lie in this analysis of trends in youth values and attitudes, the relationship between a company's size and the benefits it offers, and other topics--in the U.S. and abroad. In the process, measures for cross-cultural studies are being refined.

Final results aren't due for awhile, but interim reports are yielding some provocative findings. Internationally, it looks like employees in large companies have a better chance at higher pay, more prestige and greater on-the-job responsibility and security--while risking only minor job dissatisfaction (a finding which contradicts previous conclusions). Everywhere education plays a key role in determining occupational prestige. At home and away, large companies are more likely than small ones to select employees on the basis of educational attainments, probably because the volume of personnel paperwork makes it hard to deal with other, more individual criteria.

When all the results are in, career educationists should find the conclusions useful in helping students understand the relationship among bookwork, brainwork and earnings.

Principal Investigator: William K. Cummings
Department of Sociology
University of Chicago
Chicago, IL 60637

PRODUCTS AVAILABLE: Interim Reports--Homogeneity of Individual Value Orientations: A Macro-Social

Investigation; Organizational Size and Socioeconomic Achievement (with Atsushi Naoi); Organizational Size and Workplace Change: A Comparative Study (with L. Robert Burns and Atsushi Naoi) 1975. Contact the principal investigator for availability.

Contract No.: NE-G-00-3119 Funding: $70,851

65. THE ROLE OF WOMEN IN AMERICAN SOCIETY

How do girls learn that it is more important to get married than to be bright and successful, or boys learn that to be a man you need to be tough and competitive?

These are the messages, subtle but potentially devastating, that parents, friends and teachers impose on children--messages that often keep young women and men trapped in roles that may be both inappropriate and unfulfilling.

How can we help young girls and boys overcome the negative effects of this kind of sex-role stereotyping? One way is to present classroom materials that give them opportunities to think through the issues that will affect their life choices. The curriculum units titled "The Role of Women in American Society" do precisely that.

Two of a planned ten units are now available. Both are built around a half-hour original documentary film and include supplementary resource guides which can either stand alone or be incorporated into existing courses.

The first unit uses the films Vignettes and Girls at 12, a blue-ribbon winner in the 1975 American Film Festival, to help students examine the everyday lives of three young friends. In it the authors present the subtle and complex problems of sex stereotyping, social pressures and role modeling. The film portrays real-life situations and, together with the supporting materials, addresses such issues as the differing expectations for boys and girls in our society, what it means to be feminine or masculine, and whether being a "happy" woman allows room for having a career. A Teacher's Guide and a Student Resource Book, containing a variety of activities, substantial bibliography and filmography, are also available.

The second unit has as its focus the film Clorae and Albie, which deals with the lives of two young black women--one divorced, one single--who are facing the responsibilities of living alone, getting an education and finding some sense of purpose for their lives. The Resource Book that accompanies the film provides activities and references to help adolescents examine their own lives, capabilities and futures. All materials urge that life choices be made carefully and purposefully and that alternative role and career models be provided to help young men and women achieve their fullest potential.

Principal Investigator: Adeline Naimen
Education Development
Center, Inc.
55 Chapel Street
Newton, MA 02160

PRODUCTS AVAILABLE: Girls at 12, Vignettes and Clorae and Albie and the accompanying teacher and student guides are available through the Educational Development Corporation.

Contract NO.: NE-G-00-3-0215 Funding: $54,646
NE-C-00-3-0121 Funding: $60,000
NIE 400-76-0108 Funding: $100,000

66. THE SCHOOL-BASED COMPREHENSIVE CAREER EDUCATION MODEL (CCEM)

With millions of students in 18,000 public and private school systems facing career decisions today or tomorrow, band-aid programs for a few youngsters here and there won't be enough. Larger-scale and longer-range solutions are needed.

The Comprehensive Career Education Model (CCEM) is a system-wide plan that shows how to modify present curriculum from kindergarten through high school so youngsters are exposed to career-related activities each year they're in school.

After four years of development and refinement, materials are ready for school districts wanting to try it for themselves.

Key to the concept is infusion--helping teachers blend career education objectives into regular instruction so that students see how the things learned in school fit the real world they'll soon be entering.

Helping build and test the models were thousands of students, staff, parents and community people in six forward-looking school systems: Los Angeles, California; Hackensack, New Jersey; Atlanta, Georgia; Jefferson County, Colorado; Pontiac, Michigan and Mesa, Arizona.

What will students know as a result of K-12 activities in career education? More about themselves, their career options and their role in a work-oriented society. They should learn employability skills such as self-initiative and resourcefulness, and be able to define a career path that often requires more preparation after graduation.

The system was designed around theories of child growth and career development; ideas about survival

skills for adult living, and criterion-referenced school objectives were included. Teachers use eight goal areas as their reference point and can modify 29 instructional guides* to fit student objectives, depending on the subject matter at hand. Staff development is central to CCEM, with guides available for all grades and levels--and for administrators, too. Community involvement ideas are also suggested.

Principal Investigator: Center for Vocational Education
The Ohio State University
1970 Kenny Road
Columbus, OH 43210

PRODUCTS AVAILABLE: Contact the Center for extensive listing of materials mentioned above.

Contract No.: OEG-0-72-1419 Funding: $7,500,000

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*Another 61 teacher guides developed as part of the CCEM project are being field tested by American Institute for Research (AIR) under a separate contract. See Field Test and Revision of Comprehensive Career Education Modules.

67. SCHOOLING, TRAINING AND EXPERIENCE: ECONOMETRIC INVESTIGATION OF DETERMINANTS AND RETURNS

"The more education the better" and "knowledge is power" may have been higher education's slogans for the past several decades. But the events of the early 1970's--severe economic recession, slowed growth in the "college-type" jobs available, and an increase in the number and proportion of college graduates seeking jobs--may have brought this perspective up short.

If teenagers or their parents look at going to college as an investment in the future, these events may be signaling a decline in the rate of return on this investment compared to the rate of return that could be expected a decade ago.

Male college graduates, for example, do not have as great an assurance of getting professional jobs simply because they have been through college; and their incomes, compared to their peers who did not go to college, may not be much higher. In 1969, six out of ten college graduates got professional jobs. Five years later only five out of ten got these kinds of jobs and those who did not apparently went into sales and blue collar positions.

What does this mean for the future of higher education and society in general? While going to college will continue to give an individual an advantage over his or her peers in getting higher status and better paying jobs, the return on college as an investment may not be as great. Also, those who do not go to college may be less able to get good jobs as the educational requirements for these jobs continue to rise. Nonwhite groups, however, continue to benefit from higher levels of educational attainment.

Although economic forecasts of social changes should be treated cautiously, the following may well be in store:

- On one hand the decline in college enrollments--as well as in professional and higher-prestige opportunities for college graduates--may bring about a sharp curtailment in social mobility and possibly lead to greater class consciousness and conflict. On the other hand this trend may be offset as differences between incomes of professional and nonprofessional workers continue to diminish.

- There may be a sizable group of educated workers who are dissatisfied because they are unable to find jobs commensurate with the expectations fostered by their educational and training experiences. While this may result in political protest and general unrest, it may also be an impetus for job redesign and substantial improvement in the quality of work environments.

- Not all groups will be affected in the same manner. Young nonwhite men and women will continue to see the positive effects of anti-discrimination legislation and programs. Despite continuing problems for nonwhites, such as the instability of family background and the lack of advancement for older black workers, the higher levels of educational attainment for some is beginning to affect positively the career opportunities available to their children.

The changes in the economic rewards for education, cautions the author, may well imply numerous and significant changes for higher education. Students

entering college in the coming decade will be looking for greater emphasis on professional training rather than broad liberal education. Expansion in higher education may depend heavily upon the increased interest of adults in professional development and lifelong learning.

In effect, higher education faces new challenges in the next two decades. It may not only need to reorient its focus by emphasizing professional training and adult programs, but also to help young college graduates realistically prepare for a highly competitive job market.

Principal Investigators: Zvi Grilliches
Richard Freeman
Department of Economics
Harvard University
Cambridge, MA 02138

PRODUCTS AVAILABLE: The Changing Economic of Education; Social Mobility in the "New Market" for Black Labor; Changes in Job Market Discrimination and Black Economic Well Being; The Declining Economic Value of Higher Education and the American Social System; Estimating the Returns to Schooling: Some Econometric Problems; Wages and Earnings of Very Young Men. Contact the authors for availability.

Contract No.: NE-G-00-3-0202 Funding: $165,500

68. SEX AS A FACTOR INFLUENCING CAREER RECOMMENDATIONS OF PUBLIC SCHOOL GUIDANCE COUNSELORS

Are school counselors likely to steer girls to typically female careers and boys to male-type professions? This survey of 687 public school guidance workers shows they did exactly that. When asked to review sample profiles of the educational and career interests of typical students, counselors surveyed repeatedly recommended that girls enter careers with low prestige and a high level of women workers. Boys with identical backgrounds were recommended to enter male-dominated, high prestige occupations. Typically, a girl with top grades interested in a health career was advised to enter nursing while a boy with identical grades and background was encouraged to select medical school.

When asked if sex or race influenced their career or training recommendations to students, counselors denied it. They ranked four other attributes--such as academic performance and career interest--higher on their list of considerations. Indeed, when given case studies of typical students, each with grades of C-plus or better, counselors recommended that 95 percent enter college regardless of sex.

But when the counselors were asked their attitude toward college training, subtle sex stereotyping stood out. Men counselors tend to see college as a way to train girls for female-dominated, semi-skilled jobs. Women counselors were more prone to emphasize college as a way for girls to enter professions and break sex barriers.

Counselors surveyed were not totally unaware of the sex stereotyping in their career recommendations and argued that they are preparing the girls for the "real world." The authors take issue with this

position and suggest instead that students be informed of their legal rights for fighting discrimination rather than be limited in their career choices.

The implications for school counselors are clear: Look out for sex biases that creep into everyday communications with students. If these biases are not reversed, career counseling will only reinforce sex stereotyping in occupational choice.

Principal Investigators: David Klemmack
Susan Klemmack
James Johnson
Department of Psychology
University of Alabama
University, AL 35486

PRODUCT AVAILABLE: Sex as a Factor Influencing Career Recommendations of Public School Guidance Counselors, 1974. Contact the principal investigators for availability.

Contract No.: NE-G-00-3-0211 Funding: $9,691

69. SIMULATED OCCUPATIONAL CHOICE: A CRITERION OF COMPETENCE IN CAREER DECISION MAKING

How good are students at making career decisions? How can their competencies be measured? How can we help them improve their career decision-making skills?

The Guidance Research Group at Educational Testing Service has developed an experimental instrument which attempts to deal with these questions. It is called Simulated Occupational Choice (SOC) and can be administered to only one student at a time.

SOC puts students into a situation in which they draw on and display their competencies in career decision making. Their behaviors can be observed directly, recorded and described in a number of scores that are diagnostically meaningful. But SOC does not just provide a window on career decision making; it also offers a means of helping students become more aware of their values and learn how to process occupational information in a rational way.

The current version of SOC materials and training in their administration and scoring are available at cost from the developer. Prospective users should also read the final report on the project submitted to NIE in February 1976.

Principal Investigator: Martin Katz
Educational Testing Service
Rosdale Road
Princeton, NJ 08540

PRODUCT AVAILABLE: Simulated Occupational Choice exercises. Contact the principal investigator for availability.

Contract No.: NE-G-00-0216 Funding: $101,034

70. STATE BUDGETING FOR HIGHER EDUCATION

Faced with declining enrollments and spiraling costs, colleges and universities across the country are competing with one another for fewer higher education dollars. Some states are meeting this challenge with clear policies for allocating funds and reviewing budgets. Others are not. When money worries take priority, questions about instructional programs take second place.

Recognizing that poor budgetary policies may jeopardize state colleges and universities, this three-year NIE/Ford Foundation study is reviewing the strengths and weaknesses of various state funding procedures. All 50 states will be surveyed. Intensive interviews in 17 states will highlight how higher education dollars are spent. The study covers pre-budget requests as well as legislative action. The mid-1976 final report will analyze how states evaluate and fund higher education budget requests and will offer guidelines for long-term budgetary reform.

Principal Investigator: Lyman Glenny
Center for Research and Development in Higher Education
University of California at Berkeley
Berkeley, CA 94704

PRODUCTS AVAILABLE: Study still in progress.

Contract No.: NE-G-00-3-0210 Funding: $341,620

71. STATE-LEVEL STUDY IN CAREER EDUCATION

"Our schools are preparing students for the world of work," says educators. "But how well?" ask employers.

A four-state survey and detailed literature search by the College Entrance Examination Board indicates that secondary and postsecondary schools are indeed helping students experience the processes used in the work place. But there is still little tie between the skills students leave school with and what employers expect--the requirements of the school and work place are not aligned.

The study points to the need for a better system of linkage between town and gown--a joint effort to develop realistic school exit and job entrance requirements for students as they prepare to cross the bridge between school and work.

How to do this when job requirements shift quickly and dozens of public agencies control accreditation, certification and licensure?

Based on examination of 200 school/work links that now exist in California, Florida, New Jersey and Ohio, the following recommendations were made:

- Establish state-level Career Competency Assessment Boards to develop a common language for education, business, labor and government to use in describing school exit and job entry requirements.
- Give state and local industry/education advisory councils (the most widespread linkage mechanism) more involvement in education program development and evaluation.
- Make the work of local councils more effective by providing state guidelines to follow.

- Develop competency-based licensure and certification procedures for a broad range of career fields.

Just as much responsibility for these changes rests with employers as it does with educators. Yet at present linkages operate in only one direction, forcing education to make itself more acceptable to the business world. Some reciprocity on the part of the world of work is long overdue.

The report of the study, available from the College Board, develops a conceptual framework for viewing school and work transitions, and a supplemental report describes in detail the functioning of 26 local, state and regional linkage programs.

Principal Investigators: Solomon Arbeiter
Richard Ferrin
College Entrance Examination Board
888 Seventh Avenue
New York, NY 10019

PRODUCT AVAILABLE: Bridging the Gap: A Study of Education-to-Work Linkages. Contact the College Entrance Examination Board for availability.

Contract No.: NIE-C-74-0146 Funding: $104,385

72. STATEWIDE COMMUNITY SUPPORT MECHANISM

While most career educators just talk about greater use of community resources--both on and off the school campus--the state of Washington is trying to make sure it happens from the top corporate levels on down.

A 21-member statewide task force of business people, labor leaders and educators met monthly during school year 1975-76 to build a comprehensive support system that will open new doors for school/community cooperation.

The first big step in shaping state-level support was a mail survey of public and private associations, agencies, companies and organizations whose employees and members work in more than one geographic area (for instance, a timber company or bank with regional operations or branches). Positive responses were fed into an Evergreen Pages directory that will serve as a guide for local schools in contacting nearby firms and offices whose headquarters have given the green light to career education participation.

Just identifying the potential role of state-level organizations (all kinds of business, industry, labor and the professions) was not enough, however. Each community--from metropolitan Seattle to rural Sequim--has a unique variety of resources available for the asking. Task force members soon discovered their counterparts at the local level had other concerns:

- Teachers complained they didn't know how career education using community resources could really fit into an already crowded curriculum, how to contact resource persons, how to prepare resource persons for each activity or how to evaluate the experiences.

- Administrators didn't know how to regulate the system so the right resources were linked up with the right students at the right time.

- Most of all, community resource persons said they had never understood exactly what they were supposed to do when talking to a group of students--especially now that they were to put more emphasis on the career relevance of firefighting and less on how many gallons of water the engine pumps per minute.

Prototype materials developed in the project include:

- Community Resource Coordinator's Guide, suggesting how a local resource system might be operated;
- Teacher's Guide, including subject area planning sheets for how to use community resources to meet career education objectives;
- Evergreen Pages, a statewide listing of organizations by cluster;
- Community Resource Person's Guide, a handbook for laypeople volunteering their time and talent.

Principal Investigator: Richard R. Lutz
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PRODUCTS AVAILABLE: Prototype community support materials under field test. Contact the principal investigator for further information.

Contract No.: NIE-400-75-0041 Funding: $100,000

73. STRATEGIES FOR THE APPLICATION OF FOREIGN LEGISLATION ON PAID EDUCATIONAL LEAVE TO THE UNITED STATES SCENE

Laws in other nations may be able to teach the United States something about how our own paid educational leave programs might be designed. Levine's study indicates that just as the U.S. and Europe have similar domestic problems--the gulf between the worlds of work and education for instance--the solutions to these problems may also be similar.

Educational systems in both the U.S. and Europe neglect the education of adult workers of all ages. The result: A waste of human resources. While an economic crisis may force a nation to recognize that workers are undereducated, most countries don't take corrective action, citing the economic crisis itself as the reason why nothing can be done. Another complicating factor is that existing resources supporting the concept of paid educational leave and continuing education opportunities for workers and families are seriously underused, although collective bargaining agreements provide for such opportunities. Legislation, educational programs and union- or management-sponsored training efforts aren't coordinated either. Those most deprived by these failures are workers whose taxes support the very systems which fail them, creating the potential for taxpayer revolt against public educational systems.

How can these problems be resolved? The European countries' experiences point out that a significant element in the adoption of helpful national or regional education legislation is early involvement of labor and management. All potential contributors to such programs--labor unions, management, formal educational systems and government--must join together <u>at the outset</u> to forge cooperative, constructive and mutually supportive coordination.

What's needed by every country? A national body integrated with state, local and private agencies to advocate and coordinate paid educational leave and continuing education/work programs. Beneficiaries of these efforts should be workers and families, and ultimately the national and international economy. Such an agency could focus priorities on research and financial assistance required to enhance educational opportunities. It could also help develop more effective relationships between the worlds of labor, management and education, taking advantage of "down times" to educate the workforce, for example.

Career educationists will agree that education and work must share responsibility for bridging gaps between the two areas. Efforts to help individuals take advantage of existing programs must be supported by schools, unionists, management and government alike if they are to succeed.

Principal Investigator: Herbert A. Levine
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PRODUCT AVAILABLE: Strategies for the Application of Foreign Legislation on Paid Educational Leave to the United States Scene. ERIC #ED106517.

Contract No.: NIE-C-74-0107 Funding: $10,500

74. STUDY OF EDUCATIONAL LEAVE PROGRAMS IN EUROPE

The practice of allowing workers a leave of absence from their jobs to go back to school will have to have some bugs ironed out before its full potential can be realized.

A number of European countries acknowledge "the right to education" for all workers and make legal provision for educational leave programs under the conditions that 1) workers be paid for the time they are in the classroom, 2) they must be assured they will still have a job when they return, and 3) employment benefits must continue.

The purpose for granting most educational leaves is to provide equal educational opportunities for all workers. In theory, beautiful; in fact, difficult to achieve.

First, based on European experience in 10 countries, it appears that educational leave may result in more inequality rather than less. In Europe people already highly skilled have displayed the greatest motivation for furthering their education. In practice a very small percentage of the working population has taken advantage of the numerous opportunities for educational leave offered. Apparently if less-skilled workers are to be brought up to par with the skilled, they will have to be offered incentives for taking advantage of the leave opportunities that already exist.

Educational leave provisions are also based on the notion that more education will result in one's being better qualified for one's job. In many cases, however, the training available is not tied in any definite way to the skills required for the job a worker holds or aspires to hold.

Closely related is the hope that more education will lead to job advancement. The realities of most work

places preclude any guarantee of immediate upward mobility upon completion of skill training. Yet many people take educational leaves specifically for the purpose of "bettering themselves." This situation produces considerable dissatisfaction with the status quo--a problem which ultimately could result in a need for companies to change their operations entirely to provide all workers with more varied tasks and more active roles in decision making.

One strength of the European system, which is not found in its American counterpart, is the close working relationship of industry, government and labor in planning and supporting educational leave programs. Interestingly enough, European educators get into the act only after planning has been carried out quite thoroughly by the other three sectors.

Principal Investigator: Jarl Bengtsson
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Organization for Economic
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PRODUCT AVAILABLE: NIE Papers in Education and Work: No. 6: Paid Educational Leave.

Contract No.: NIE-C-74-0106 Funding: $32,000

75. STUDY OF PRACTICAL VOCATIONAL ORIENTATION PROGRAM (P.R.Y.O.) IN SWEDEN

A three-way partnership between Sweden's government, education and business sectors gives mid-teens a hands-on sampling of the real working world.

Called "Practical Work Introduction" (or P.R.Y.O. in Swedish), and designed to span two academic years, the program's eighth-grade participants visit and observe in a factory, a business and a service agency. Ninth-grade students spend two weeks of their last compulsory year of school working at tasks in one business each selects. Parents, teachers and a career counselor help the student decide which work site will be best.

These practical experiences generate opportunities for subject area in-school learning, too. For example, language arts classes make class projects of writing thank-you notes to business and industries which hosted students' visits. Art experiences become expressions of events in the out-of-school, workaday world.

This realistic approach has won the support of parents and employers alike. Officials report that nearly 85 percent of all Swedish businesses cooperate voluntarily with the program, although they receive no money or tax credit for doing so. Parents are urging that more such experiences be extended to young people who stay in school beyond the compulsory years.

According to Belding, while no innovation should be adopted wholesale, individual school systems could gain from trying P.R.Y.O. or similar career exploration programs on for size.

Principal Investigator: Robert E. Belding
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Iowa City, IA 52242

PRODUCTS AVAILABLE: "PRYO--Sweden's Unique Career Education for ALL Secondary School Students." Western European Education 7: 37-45; Fall 1975. "A Career Education Approach Worth Examining--There's More to Swedish Schools than Avant-Garde Sex Education." The American School Board Journal 142: 37-38; July 1975. "Career Education in Sweden." The Education Digest: 48-50; October 1975. "PRYO--Another School Import from Sweden?" The Clearing House 49: 163-166; December 1975. "Real Work Experience for ALL Teenagers--the Swedish Way." Journal of Career Education 1: 32-34; Winter 1975. Contact the principal investigator for further information.

Contract No.: NIE-C-74-0061 Funding: $5,150

76. STUDY OF THE RELATIVE EFFECTIVENESS OF PROPRIETARY VERSUS PUBLIC VOCATIONAL EDUCATION

College used to be a privilege for a chosen few. But recent years have seen the growth of public community colleges, technical schools and "for profit" trade and technical schools. Many of their students are the first in their families to sample post-secondary education.

What kinds of jobs are these institutions doing for these "new students" and how much does it cost?

Generally, graduates of public schools had about the same success in the labor market as graduates of postsecondary schools. Placement rates did differ with the occupational area for which students were trained, however. For example, 81 percent of the entire cosmetology sample found cosmetology jobs after graduation. Accounting graduates were not so fortunate--20 percent of proprietary graduates and 10 percent of public graduates got accounting or accounting-related jobs after completing their training.

Real costs to the 2,270 students of the sample's 21 public and 29 proprietary schools were about equal. Tuition at proprietary schools is higher, but the time required to complete the coursework is shorter and the earnings foregone to attend classes are less. Public school tuition is lower, but students attend fewer hours each week, making the completion time longer and the loss of earnings higher.

Researchers concluded that proprietary schools are not reducing the inequities associated with sex, ethnicity, or lower socioeconomic status. Women earned less than men in the same jobs and minority graduates earned less than whites in five of the six sample occupations. In addition, eight out of ten graduates of professional and technical-level postsecondary vocational programs did not get the

jobs they trained for, but with the exception of secretaries, they barely earned the federal minimum wage.

What ought to be done? "Make sure that people have at least minimal information when they make decisions," urges Wilms. Occupational education consumers need more facts on the risks and benefits of different kinds of programs before they make decisions. Government and the schools themselves should make this happen, asserts the final chapter, through truth-in-advertising regulations, the development of standards for vocational program effectiveness, and action to assure that graduates get equal pay for equal work.

Principal Investigator: Wellford Wilms
Center for Research and Development in Higher Education
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Berkeley, CA 94704

PRODUCT AVAILABLE: Public and Proprietary Vocational Training: A Study of Effectiveness (1974). Available from the publisher, D.C. Heath & Co., 141 Spring Street, Lexington, MA 02173.

Contract No.: NE-G-00-3-0204 Funding: $159,305

77. STUDY OF TRANSFERRABLE SKILLS

Over 11 million people changed occupations or employers during a recent 12-month period. What skills will help students when they move to another job--whether voluntarily or not? This project is studying patterns of occupational mobility in hopes of identifying skills that can be easily learned and transferred from one job to another. Examples include basic communication skills, technical skills, decision-making skills, planning skills and interpersonal skills.

A second project objective is to describe occupational mobility data sources with an eye toward determining the need for future job-transfer skills studies. Identifying the range of classification systems used in occupational mobility analysis is the third goal of the project.

Three papers and a series of workshops will bring together information from researchers, labor unions, business and industry about the kinds of transferrable skills used in the marketplace, assessment of their importance and the role of education in providing training in these skills. Project staff will visit training and retraining programs to see how present practices take into account the training of transferrable skills.

Expected outcomes include improvements in the design of school transcripts and catalogs, employer records, job applications and counseling materials.

Principal Investigator: Frank Pratzner
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PRODUCTS AVAILABLE: Under development

Contract No.: NE-C-00-3-0078 Funding: $292,600

78. A STUDY OF THE UTILIZATION OF POSTSECONDARY EDUCATION IN CAREERS

College courses may not help you do the job you thought you were training for, but having the sheepskin still serves as a union card.

So indicates a recent survey of 8,000 college graduates from the Class of 1965. Eleven years later most had jobs requiring little of their college coursework. In fact, many held jobs far removed from their college major. Liberal arts courses like English and social sciences were often found to be more useful in the real world of work than many job-related offerings on campus.

Looking back on their college courses, most graduates had no clear career goals during their college years: Over half chose their careers at graduation or later. So most college courses were taken without much forethought or planning for the future. Indeed, the study shows that what you major in may help you do a better job in a different field than the one you thought you were preparing for at the time. For example, 53 percent wound up working for private companies and 38 percent followed general business careers, although only 18 percent had majored in business at college. Among the women represented in the original pool of 8,000, however, the greatest percentage became teachers. Less than half of all women surveyed saw their positions as having policy- or decision-making responsibilities.

Feelings were generally mixed about the usefulness of four college years in providing general knowledge and improving the ability to think. Although 73 percent rated their education as "very useful" in providing a well-rounded knowledge base, only 43 percent thought that college improved their thinking skills. They did agree though, that having the diploma was useful in getting their first job.

Of the persons seeking employment related to their college major, liberal arts grads had it the roughest--even in the mid-60's. Moreover, when liberal arts graduates were pushed into any occupation they could find, they often wound up being dissatisfied. Since the job market for all college graduates is getting tighter, this trend may be on the rise.

Students could improve their employment prospects by being more tuned in to the career possibilities in their major and supplementing liberal arts training with practical courses. But even though vocational courses help, on-the-job experience is still better, claim the grads. Over half of the work skills needed on a job are learned after being hired. This was true even for occupations requiring considerable technical preparation, as in allied health fields.

Since so much training does occur on the job, liberal arts majors who are bright and highly motivated should be top candidates for jobs in the business world. Not so, said the respondents. Employers still say they want persons with specific business education skills. Equal weight should be given, claim the authors of this report, to the communication, decision-making, and critical-thinking skills that make for more versatile, creative employees.

Principal Investigators: Lewis C. Solmon
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PRODUCT AVAILABLE: Job Satisfaction After College--The Graduates' Viewpoint and College Education on the Job--The Graduates' Viewpoint. Available from the COC Foundation, P.O. Box 2263, Bethlehem, PA 18001.

Contract No.: G-74-0091 Funding: $53,989

79. THREE POLICIES OF THE ANACOSTIA COMMUNITY SCHOOL BOARD: A STUDY OF THEIR INTENT AND OPERATIONALIZATION

How can schools boards be sure that implemented policies are really what the board members intended? As part of the Response to Educational Needs Project, Langsdorf charted the course of three Anacostia Community School Board policies--from intent through operation--to find answers to this important question.

The Anacostia Community School Board (ACSB) and its local school boards are working out school problems effectively using the bywords communication, cooperation and mutual commitment. This report picked out three board policies for attention:

- "The Local School Boards shall have a direct involvement in their schools' dealings with concerns of importance to their community.
- "The Anacostia Community School Board shall have a direct involvement in the schools of Region I, dealing with concerns brought to them by the Local School Boards as being untreatable at the local level.
- "The Unit Task Forces at each school shall include in their composition at least three parents and one student, to provide direct input from the community to the Response to Educational Needs Project (RENP)."

Each broad policy was examined with such questions as "What does it mean?" "Who generated the policy?" and "How was the policy communicated?". Identifying strategies for successful policies was further facilitated by looking at specific issues.

For example, concerns about buildings and grounds recurred most frequently. Repairs necessitated by vandalism or deterioration of the physical plant

occupied time and attention of Local School Boards, and this provided an excellent opportunity to see how well the first policy was implemented. This issue provided a common point of interest to principals, teachers, parents and students, and each could support the other in efforts to remedy the situation at the local level. If local efforts failed, Local School Boards could take the matter to the Anacostia Community School Board, giving ACSB a chance at "direct involvement...with concerns... being untreatable at the local level." The wide representation on the local boards was evident in how and by whom "untreatable" concerns were presented to ACSB (policy three).

What messages does this hold for policy makers--say, advisory groups charged to help build good career education programs?

- Sometimes tangibles (such as repairs) provide proof that school boards can be effective problem solvers, thus serving as a starting point for local action. Later on, dealing with more abstract and complex problems can cement an increasingly productive partnership among persons having an interest in the smooth operation of the school district.

- All parties concerned--parents, students, teachers, principals and administrators--learn to communicate better while serving on local boards, working together cooperatively and identifying local resources useful in improving school conditions. As the trust level builds, a sense of "team" emerges.

- Policies most likely to be successfully implemented are those which are consistent with the historical goals of the program, in the self-interest of those most affected by it, clear to all those concerned,

formulated through broad participation of all those involved, within the skills of those charged with implementation and followed up throughout the implementation process by those who originated the policy.

The full report will be of assistance to decision makers interested in ironing out policy implementation problems.

Principal Investigator: Michael Langsdorf
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PRODUCT AVAILABLE: Three Policies of the Anacostia Community School Board: A Study of Their Intent and Operationalization. Available from Richard A. Gibboney Associates, Inc.

Contract No.: NIE 400-76-0056 Funding:

80. TOWARD A TEMPORAL SEQUENCE OF EDUCATIONAL ATTAINMENT--CAREER CONTINGENCIES OF YOUTH: THE FIRST THREE POST HIGH SCHOOL YEARS

Community college enrollment in the U.S. is increasing at a considerably faster rate than four-year colleges and universities. Postsecondary students are responding enthusiastically to the community college alternative--absence of admission requirements, availability of vocational training programs with the "promise" of a good job, low cost and transfer programs with ready access to four-year colleges. Yet the effect of a two-year college program on career aspirations, future employability and student personal development remains undetermined. The characteristics of the two-year college students versus students who terminate their educations at high school or enter a four-year college program are still not clearly understood.

This project tries to answer some of these questions by developing a profile of a typical two-year college student. In a selected sample of approximately 2800 high school seniors, the researchers compared characteristics of individuals entering community college, four-year college and those terminating their formal education. Although data analysis and summary of implications is still underway, an interim report outlines some preliminary findings. For example, the decision to attend a community college is usually made later in the high school years than the decision to enroll in a four-year college. Often the decision has the characteristics of a compromise. Furthermore, once enrolled in the two-year program students may find it necessary to drop in and out several times before completing or terminating their programs.

This interruption of education, for reasons as yet unspecified, results in prolonging the time needed to complete any particular training or degree.

These and other related observations are contributing to a more complete picture of two-year college students and the community college's effect on their career attainments and further educational development.

Principal Investigators: Richard Rehberg
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PRODUCT AVAILABLE: Study complete. Contact authors for information on availability.

Contract No.: NE-G-00-3-0217 Funding: $27,639

81. THE VOCATIONAL CHOICE PROCESS OF NONPROFESSIONAL, NONMANAGERIAL WORKERS

College education may not be the key to a good job these days, and for some youth, choosing not to go to college looks more promising than going.

However, little information is presently available to help students and blue-collar workers to select occupations and plan careers that require little or no further educational training. Even less is known about the vocational choice process of nonprofessional workers and the role that chance and environmental factors play in their decision making.

Many vocational theories emphasize the major role of the individual's personal characteristics or self-concept. Often these theories exclude a consideration of how external influences--being in the right place at the right time, socioeconomic status and job realities--transform ideals into realities. Nonprofessional workers often do not have the resources, the training opportunities or the experiences to be as much a master of their fate as some theories presume.

To determine what does happen to nonprofessional workers--what influences their decisions--this study is applying Holland's theory of vocational choice to 925 nonprofessional, nonmanagerial men and women.

Do these individuals in fact seek out environments which satisfy their orientation and needs? Are certain personality types actually more satisfied in what Holland describes as complementary work groups?

The research now in progress is asking workers to describe their work histories, indicating what internal and external forces influenced their occupational choices. From this should come a much better picture of how nonprofessionals make vocational decisions and how counselors can help non-college-bound youth make plans for the future.

Principal Investigator: Paul R. Salomone
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PRODUCTS AVAILABLE: A Review of Holland's Theory and the Sociological Theories; Strategies for Increasing Response Roles to Mailed Questionnaires; and Research Plan: Revised and Operationalized. Contact Paul Salomone for availability.

Contract No.: NE-G-00-3-0203 Funding: $132,848

82. WOMEN: ISSUES OF CAREER GUIDANCE AND VOCATIONAL COUNSELING

Nine out of ten U.S. women will work outside their homes at some time in their lives, spending an average of four hours a day on homemaking tasks in addition to time spent at their jobs. Furthermore, women born after 1935 are much less likely to interrupt their careers during the child-rearing years than women born before 1935.

What does it all mean? Women and girls have important career decisions to face, say the authors of the Sourcebook. Women often need professional guidance in planning for the dual role of homemaker and worker. Caught between these two roles they frequently experience conflict, guilt and depression. Counselors can play a significant part in helping women reduce these feelings. Through such techniques as group discussion, role reversal, cognitive dissonance and the introduction of new role models, the negative feelings can be replaced with positive ones. Old myths like "women who work are neglecting their children" can be debunked.

Clearly women have much go gain from improved counseling--better life-planning skills, increased efficiency and support for reassessing distribution of household responsibilities with marriage partners, to name a few. But recent research concludes that information resource counselors used in the past is sex-biased, misleading and out of date. The Sourcebook and its two companion publications, Women at Work: Things are Looking Up and Selected Annotated Bibliography on Women at Work, are handy tools for the counselor. They provide solid information on changing stereotypic attitudes, teaching decision-making and problem-solving skills, increasing options and nontraditional career opportunities for women, women's legal rights in the world of work, counseling techniques and strategies, and a review of research on women in the workforce.

Counselor trainers are provided with suggestions for teaching sex-bias-free counseling procedures and hints for helping counselors identify their own biases.

Things are looking up and this three volume set provides another stepping stone on the way.

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PRODUCTS AVAILABLE: New Career Options for Women: A Counselor's Sourcebook; New Career Options for Women: Things are Looking Up; Selected Annotated Bibliography of New Career Options for Women. Available from Human Sciences Press, 72 Fifth Avenue, New York, NY 10011.

Contract No.: NIE-C-74-0100 Funding: $20,433

83. WORK, FAMILY INTERACTION AND CHILD DEVELOPMENT

Are working parents neglecting children, home and each other? Not so says a study of 14 families where both mother and father hold jobs in addition to parenting.

Dual work patterns do alter roles and attitudes within families, however:

- Men are taking on household and child care tasks, but mostly on a "helping out" basis.

- Women are still working, but more out of necessity (in part because that's easier to justify) than out of a stated desire for personal career satisfaction.

Mothers, however, are still accepting major responsibility for overseeing housework and children. Most fathers did little more than share a few of the household tasks. In effect, then, roles haven't changed much.

Child care is another problem. If it's decided that one parent or the other should be at home with the children at all times, job hours have to be arranged accordingly. Because formal day-care programs are too costly for most middle-income families (averaging $40 a week per child), relatives, friends or neighbors are often pressed into service.

Despite full and exhausting job schedules, working parents make sacrifices to spend time with their children. Raising a family is as high a priority for working parents as it is in other households. In most cases the father's work controls the mother's access to a job. Husbands

usually accommodate--but remain somewhat ambivalent about--the changes in their family life when the wife works, too. This creates stress for working parents as does the problem caused by general social pressure against mothers who work "outside" jobs. Another problem is embarrassed fathers who hate to admit they're doing "women's work" at home.

In short, while women's roles are changing rapidly, families seem to be adapting painfully slowly to an equitable sharing of the work load.

Principal Investigator: Laura Lein
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PRODUCT AVAILABLE: Work and Family Life (Final Report), 1974. Contact author for availability.

Contract No.: NE-G-00-3-0065 Funding: